

81905

## SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: BEN SACKLEY Examiner #: 73489 Date: 10/8/02  
 Art Unit: 1626 Phone Number 305-6889 Serial Number: 09/834,728  
 Mail Box and Bldg/Room Location: CM1 3E11 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need. *mej*

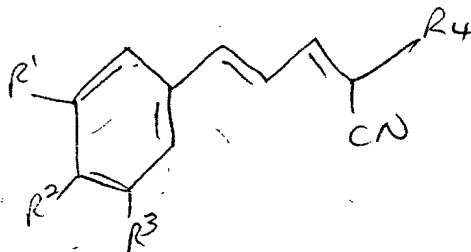
\*\*\*\*\*  
 Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Waxel Compounds for modulating

Inventors (please provide full names): Roffman et al.

Earliest Priority Filing Date: 4/13/00

\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.



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Please see the attached species

1600  
 SUPERVISORY PATENT EXAMINER  
 GROUP 1600

## STAFF USE ONLY

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Searcher Location: \_\_\_\_\_

Date Searcher Picked Up: \_\_\_\_\_

Date Completed: 12/13/02

Searcher Prep & Review Time: \_\_\_\_\_

Clerical Prep Time: \_\_\_\_\_

Online Time: \_\_\_\_\_

## Type of Search

NA Sequence (#) \_\_\_\_\_

AA Sequence (#) \_\_\_\_\_

Structure (#) \_\_\_\_\_

Bibliographic \_\_\_\_\_

Litigation \_\_\_\_\_

Fulltext \_\_\_\_\_

Patent Family \_\_\_\_\_

Other \_\_\_\_\_

## Vendors and cost where applicable

STN \_\_\_\_\_

Dialóg \_\_\_\_\_

Questel/Orbit \_\_\_\_\_

Dr.Link \_\_\_\_\_

Lexis/Nexis \_\_\_\_\_

Sequence Systems \_\_\_\_\_

WWW/Internet \_\_\_\_\_

Other (specify) \_\_\_\_\_

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FILE COVERS 1907 - 13 Dec 2002 VOL 137 ISS 25

FILE LAST UPDATED: 12 Dec 2002 (20021212/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

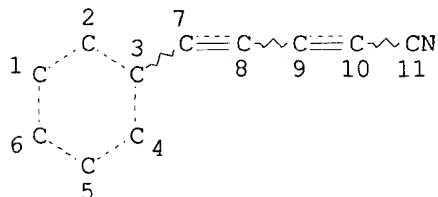
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L1 STR



NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

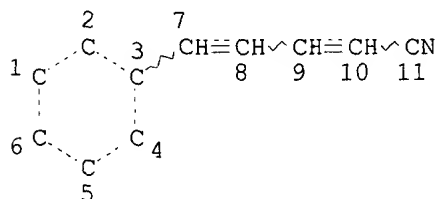
RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 11

STEREO ATTRIBUTES: NONE

L3 1788 SEA FILE=REGISTRY SSS FUL L1

L13 STR



NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM  
DEFAULT ECLEVEL IS LIMITED

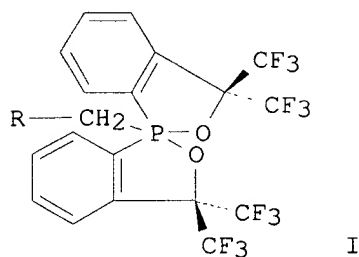
GRAPH ATTRIBUTES:  
RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 11

STEREO ATTRIBUTES: NONE  
L14 30 SEA FILE=REGISTRY SUB=L3 SSS FUL L13  
L15 34 SEA FILE=HCAPLUS ABB=ON PLU=ON L14

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=> d ibib abs hitrn 115 1-34

L15 ANSWER 1 OF 34 HCAPLUS COPYRIGHT 2002 ACS  
ACCESSION NUMBER: 2002:120942 HCAPLUS  
DOCUMENT NUMBER: 137:5970  
TITLE: Highly Z-selective synthesis of disubstituted  
.alpha.,.beta.-unsaturated cyanides and amides using  
10-P-5 Wittig type reagents  
AUTHOR(S): Kojima, Satoshi; Kawaguchi, Kazuhiro; Matsukawa,  
Shiro; Uchida, Keiichiro; Akiba, Kin-Ya  
CORPORATE SOURCE: Department of Chemistry, Graduate School of Science,  
Hiroshima University, Higashi-Hiroshima, 739-8526,  
Japan  
SOURCE: Chemistry Letters (2002), (2), 170-171  
CODEN: CMLTAG; ISSN: 0366-7022  
PUBLISHER: Chemical Society of Japan  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
OTHER SOURCE(S): CASREACT 137:5970  
GI



AB Phosphoranes I [R = CN, CONMe2, CONH2] were examd. for Wittig type reactions. All three reacted to give the corresponding olefins. The reaction of I [R = CN] with aldehydes gave .alpha.,.beta.-unsatd. cyanides with high Z-selectivity in the case of aliph. aldehydes (Z:E = 94:6 to 99:1). On the other hand, the reactions of I [R = CONMe2, CONH2] with aldehydes yielded .alpha.,.beta.-unsatd. amides with high Z-selectivity for both arom. and aliph. aldehydes (Z:E = 99:1 to >99:<1).

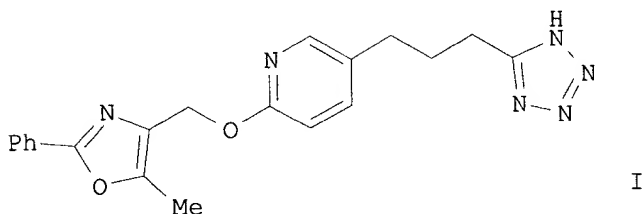
IT 53649-66-4P 110729-75-4P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(highly Z-selective synthesis of disubstituted .alpha.,.beta.-unsatd.  
cyanides and amides using 10-P-5 Wittig type reagents)

REFERENCE COUNT: 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 2 OF 34 HCAPLUS COPYRIGHT 2002 ACS  
 ACCESSION NUMBER: 2002:19837 HCAPLUS  
 DOCUMENT NUMBER: 136:350405  
 TITLE: Novel 5-substituted-1H-tetrazole derivatives as potent glucose and lipid lowering agents  
 AUTHOR(S): Momose, Yu.; Maekawa, Tsuyoshi; Odaka, Hiroyuki; Ikeda, Hitoshi; Sohda, Takashi  
 CORPORATE SOURCE: Medicinal Chemistry Research Laboratories II, Takeda Chemical Industries, Ltd., Chuo-ku. Osaka, 540-8645, Japan  
 SOURCE: Chemical & Pharmaceutical Bulletin (2002), 50(1), 100-111  
 CODEN: CPBTAL; ISSN: 0009-2363  
 PUBLISHER: Pharmaceutical Society of Japan  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 GI



AB A series of 5-(4-alkoxyphenylalkyl)-1H-tetrazole derivs. contg. an oxazole-based group at the alkoxy moiety was prepd.; the antidiabetic and antihyperlipidemic effects of members of the series were evaluated in two genetically obese and diabetic animal models. The tetrazole compds. were prepd. using the cycloaddns. of azides with the corresponding nitriles. Many of the 5-(4-alkoxyphenylalkyl)-1H-tetrazoles showed potent glucose and lipid lowering activities in KKAY mice. Methylphenyloxazolylmethoxypropylpropyltetrazole I had potent glucose lowering activity (ED<sub>25</sub> = 0.0839 mg.cntdot.kg-1.cntdot.d-1), being 72 times more active than pioglitazone hydrochloride (ED<sub>25</sub> = 6.0 mg.cntdot.kg.cntdot.d-1); in addn., I also exhibited strong antihyperlipidemic activity (ED<sub>25</sub> = 0.0277 mg.cntdot.kg-1.cntdot.d-1) in Wistar fatty rats. The antidiabetic activity of I is likely related to its potent agonistic activity for peroxisome proliferator-activated receptor .gamma. (PPAR.gamma.) (EC<sub>50</sub> = 6.75 nM).

IT **166253-45-8P 421558-46-5P 421558-47-6P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. of oxazolylalkoxyphenylalkyltetrazoles as antihyperglycemic and antihyperlipidemic agents)

REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

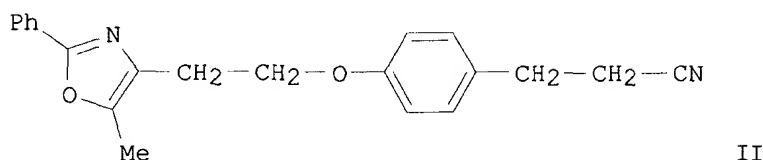
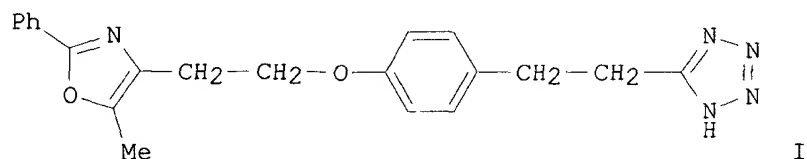
L15 ANSWER 3 OF 34 HCAPLUS COPYRIGHT 2002 ACS  
 ACCESSION NUMBER: 2002:2786 HCAPLUS  
 DOCUMENT NUMBER: 136:37609  
 TITLE: Tetrazole derivatives as hypoglycemic and hypolipidemic agents  
 INVENTOR(S): Soda, Takasi; Ikeda, Hitosi; Momose, Yu  
 PATENT ASSIGNEE(S): Takeda Chemical Industries, Ltd., Japan  
 SOURCE: Russ., No pp. given



DOCUMENT TYPE: CODEN: RUXXE7  
 LANGUAGE: Patent  
 FAMILY ACC. NUM. COUNT: 1 Russian  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
RU 2144533	C1	20000120	RU 1994-43788	19941209

OTHER SOURCE(S): MARPAT 136:37609  
 GI



AB Tetrazole derivs. such as I were prepd. in several steps. Thus, treatment of 0.7 g II with 0.411 g NaN<sub>3</sub>, 0.337 g NH<sub>4</sub>Cl in 15 mL DMF at 120.degree. for 24 h gave a 48% yield of I. The prepn. of II was also described. At a dose of 0.01 wt. % in their food, I showed hypoglycemic and hypolipidemic activities in mice of 45 and 28%, resp., compared to controls.

IT **166253-45-8P 166253-83-4P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(tetrazole derivs. as hypoglycemic and hypolipidemic agents)

IT **166253-64-1P**

RL: SPN (Synthetic preparation); PREP (Preparation)

(tetrazole derivs. as hypoglycemic and hypolipidemic agents)

L15 ANSWER 4 OF 34 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2001:175058 HCAPLUS

DOCUMENT NUMBER: 134:359390

TITLE: Wavelength-dependent regioselective  
 E(trans).fwdarw.Z(cis) photoisomerization in  
 anthryldienes

AUTHOR(S): Reddy, M. Janaki Ram; Rao, G. Venugopal; Bushan, K.  
 Mani; Reddy, Maruthi Janaki Ram; Gopal, V. Raj; Rao,  
 V. Jayathirtha

CORPORATE SOURCE: Organic Chemistry Division II, Indian Institute of  
 Chemical Technology, Hyderabad, 500 007, India

SOURCE: Chemistry Letters (2001), (3), 186-187

CODEN: CMLTAG; ISSN: 0366-7022

PUBLISHER: Chemical Society of Japan

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Anthracenyldiene derivs. carrying electron withdrawing end group displayed wavelength dependent regioselective E(trans) .fwdarw. Z(cis) isomerization from the singlet excited state. Fluorescence studies indicated the highly polarized/charge-transfer nature of the singlet excited state.

IT 339047-96-0 339048-02-1

RL: PEP (Physical, engineering or chemical process); PROC (Process)  
(wavelength-dependent regioselective E.fwdarw.Z photoisomerization upon direct excitation and triplet sensitization of anthracenyldiene derivs.)

REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 5 OF 34 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1998:574278 HCAPLUS

DOCUMENT NUMBER: 129:259958

TITLE: Pyrolytic electrocyclization of arylmethylidene derivatives of glutacononitrile. Synthesis of dihydroaromatic 1,3-dinitriles

AUTHOR(S): Banciu, Mircea D.; Brown, Roger F. C.; Coulston, Karen J.; Eastwood, Frank W.; Macrae, Tamara

CORPORATE SOURCE: Chemistry Department, Monash University, Clayton, 3168, Australia

SOURCE: Australian Journal of Chemistry (1998), 51(8), 695-701  
CODEN: AJCHAS; ISSN: 0004-9425

PUBLISHER: CSIRO Publishing

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Condensation of seven arom. aldehydes with glutacononitrile gave 4-(arylmethylidene)-2-pentenitriles. Flash vacuum pyrolysis of the dinitriles at 750.degree./0.02-0.03 mm gave annulated dihydroarom. 1,3-dicarbonitriles by electrocyclic ring closure. Fully aromatized products formed by secondary loss of H2 or HCN are also obtained.

IT 62486-11-7P 213532-37-7P 213532-38-8P  
213532-41-3P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(dihydroarom. 1,3-dinitriles via pyrolytic electrocyclization of glutacononitrile arylmethylidene derivs.)

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 6 OF 34 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1998:376483 HCAPLUS

DOCUMENT NUMBER: 129:95677

TITLE: One-Pot Conversion of .alpha.,.beta.-Unsaturated Alcohols into the Corresponding Carbon-Elongated Dienes with a Stable Phosphorus Ylide-BaMnO4 System. Synthesis of 6'-Methylene Derivatives of Neplanocin A as Potential Antiviral Nucleosides. New Neplanocin Analogs. 11

AUTHOR(S): Shuto, Satoshi; Niizuma, Satoshi; Matsuda, Akira

CORPORATE SOURCE: Graduate School of Pharmaceutical Sciences, Hokkaido University, Sapporo, 060-0812, Japan

SOURCE: Journal of Organic Chemistry (1998), 63(13), 4489-4493  
CODEN: JOCEAH; ISSN: 0022-3263

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB We have developed an efficient one-pot method for elongating the carbon skeleton of .alpha.,.beta.-unsatd. primary alcs using a stable phosphorous ylide-BaMnO4 system.

IT 209622-32-2P

RL: SPN (Synthetic preparation); PREP (Preparation)

(one-pot conversion of .alpha.,.beta.-unsatd. alcs. into the  
corresponding carbon-elongated dienes)

REFERENCE COUNT: 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 7 OF 34 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1996:134772 HCAPLUS  
DOCUMENT NUMBER: 124:288399  
TITLE: Reaction of .alpha.-halo organoindium reagents with  
carbonyl compounds and electron-deficient alkenes  
AUTHOR(S): Araki, Shuki; Hirashita, Hirashita; Shimizu, Ken;  
Ikeda, Takahiro; Butsugan, Yasuo  
CORPORATE SOURCE: Department Applied Chemistry, Nagoya Institute  
Technology, Nagoya, 466, Japan  
SOURCE: Tetrahedron (1996), 52(8), 2803-16  
CODEN: TETRAB; ISSN: 0040-4020  
PUBLISHER: Elsevier  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB A variety of .alpha.-halo organoindium reagents were prepd. in situ from  
the reaction of gemdihalo compds. with indium metal, and their reactions  
with carbonyl compds. and electron-deficient alkenes were examd. The  
reactions of simple 1,1-diiodoalkanes with indium metal gave no defined  
products but benzal iodide gave stilbene in moderate yield. .alpha.-Halo  
organoindium reagents derived from .alpha.,.alpha.-dibromo carbonyl  
compds. gave oxiranes and cyclopropanes upon the reactions with aldehydes  
and alkenes, resp. 3,3-Dichloropropenes reacted with aldehydes in the  
presence of indium metal to give the corresponding chlorohydrins and/or  
homoallyl alcs., depending on the structures of both the dichloropropanes  
and aldehydes employed.

IT 14164-31-9P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(addn. of organoindium reagents to carbonyl compds. and alkenes)

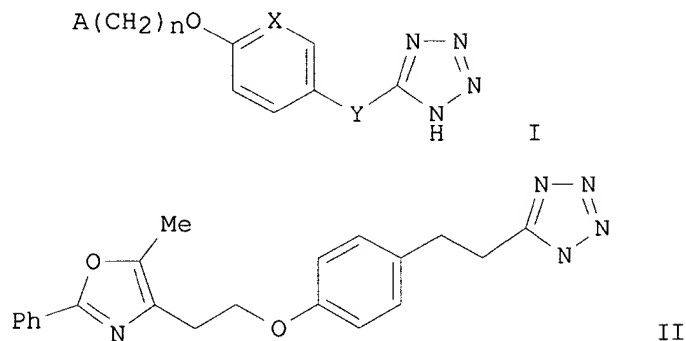
L15 ANSWER 8 OF 34 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1995:733194 HCAPLUS  
DOCUMENT NUMBER: 123:143900  
TITLE: [[[heterocyclyl]alkoxy]phenyl]alkyl]tetrazoles and  
[[[heterocyclyl]alkoxy]pyridinyl]alkyl]tetrazoles as  
antidiabetics anticholesteremics  
INVENTOR(S): Sohda, Takashi; Ikeda, Hitoshi; Momose, Yu  
PATENT ASSIGNEE(S): Takeda Chemical Industries, Ltd., Japan  
SOURCE: Eur. Pat. Appl., 42 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 629624	A1	19941221	EP 1994-304225	19940610
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE				
JP 07053555	A2	19950228	JP 1994-121288	19940602
US 5591862	A	19970107	US 1994-257056	19940608
CA 2125549	AA	19941212	CA 1994-2125549	19940609
AU 682218	B2	19970925	AU 1994-77684	19941108
AU 9477684	A1	19960516		
TW 393477	B	20000611	TW 1994-83110305	19941108
ZA 9408919	A	19951121	ZA 1994-8919	19941110
CN 1124246	A	19960612	CN 1994-119372	19941205
CN 1068326	B	20010711		

PRIORITY APPLN. INFO.: JP 1993-140906 A 19930611

OTHER SOURCE(S): MARPAT 123:143900  
GI



AB The [[[(heterocyclyl)alkoxy]phenyl]alkyl]tetrazoles and [[[(heterocyclyl)alkoxy]pyridinyl]alkyl]tetrazoles I (A = heterocyclic group; n = integer; X = methine, nitrogen; Y = alkanediyl) were claimed for the treatment of hypoglycemia (antidiabetics) and hypolipidemia (anticholesteremics). An example compd., 5-[2-[4-[2-(5-methyl-2-phenyl-4-oxazolyl)ethoxy]phenyl]ethyl]-1H-tetrazole (II) was prepd.

IT **166253-45-8P 166253-59-4P 166253-64-1P**  
**166253-73-2P 166253-83-4P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
([[(heterocyclyl)alkoxy]phenyl]alkyl]tetrazoles antidiabetics  
anticholesteremics)

L15 ANSWER 9 OF 34 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1992:571149 HCAPLUS

DOCUMENT NUMBER: 117:171149

TITLE: Reactions of salicylaldehyde with some conjugated olefins

AUTHOR(S): Yamaguchi, Seiji; Saitoh, Takenao; Kamiomezawa, Megumi; Enomoto, Hiroko; Kawase, Yoshiyuki

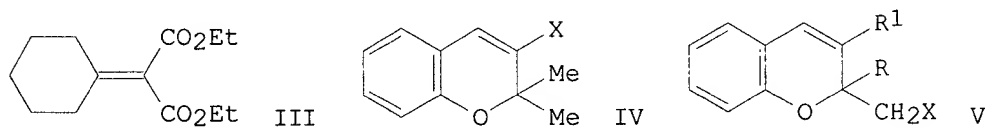
CORPORATE SOURCE: Fac. Sci., Toyama Univ., Toyama, 930, Japan

SOURCE: Journal of Heterocyclic Chemistry (1992), 29(4), 755-8  
CODEN: JHTCAD; ISSN: 0022-152X

DOCUMENT TYPE: Journal

LANGUAGE: English

GI



AB Some condensation reactions of salicylaldehyde with various conjugated olefins, Me<sub>2</sub>C:CHX (I, X = CO<sub>2</sub>Et, cyano, COMe), Me<sub>2</sub>C:CXCO<sub>2</sub>Et (II), and III, were studied. Condensations with I gave 2,2-dimethyl-2H-chromene derivs. IV (X = H, CO<sub>2</sub>Et, cyano, COMe) via "3-2 cyclization", while the condensations with II and III gave 2-methyl-2H-chromen-2-yl)acetic acid derivs. V [(R = Me, R<sub>1</sub> = H; X = CO<sub>2</sub>Et, RR<sub>1</sub> = (CH<sub>2</sub>)<sub>4</sub>] via "3-4 cyclization".

IT **143661-14-7P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(prepn. and intramol. cyclization of)

IT **143661-18-1P**

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)

L15 ANSWER 10 OF 34 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1991:206702 HCAPLUS

DOCUMENT NUMBER: 114:206702

TITLE: Organotellurium ylide reactions. Part II. Synthesis  
of 2,4-conjugated unsaturated ketones, esters and  
nitriles

AUTHOR(S): Zhong, Qi; Liu, Changqing; Shao, Jianguo

CORPORATE SOURCE: Dep. Chem., Yangzhou Norm. Coll., Yangzhou, 225002,  
Peop. Rep. China

SOURCE: Youji Huaxue (1991), 11(1), 58-63

CODEN: YCHHDX; ISSN: 0253-2786

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

OTHER SOURCE(S): CASREACT 114:206702

AB A convenient procedure for the synthesis of 2,4-conjugated unsatd.  
ketones, esters and nitriles by the condensation of telluronium salts  
Bu<sub>2</sub>Te+CH<sub>2</sub>RX- (R = Bz, substituted Bz; X = Br, Cl) with R<sub>1</sub>CH:CHCHO (R<sub>1</sub> =  
Ph, substituted Ph) is reported. The yields are 85 .apprx. 96%. All  
products are the E,E-isomers as confirmed by their m.p., IR and <sup>1</sup>H NMR  
spectra. Effect of solvents and bases on the condensation are studied.  
The reaction is likely to proceed with telluronium ylides as  
intermediates.

IT **53649-66-4P 133505-28-9P 133505-29-0P**

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)

L15 ANSWER 11 OF 34 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1990:531683 HCAPLUS

DOCUMENT NUMBER: 113:131683

TITLE: A stereoselective synthesis of cis-alkenenitriles  
through Reformatskii-Peterson reaction

AUTHOR(S): Palomo, Claudio; Aizpurua, Jesus M.; Aurrekoetxea,  
Natalia

CORPORATE SOURCE: Fac. Quim., Univ. Pais Vasco, San Sebastian, 20080,  
Spain

SOURCE: Tetrahedron Letters (1990), 31(15), 2209-10

CODEN: TELEAY; ISSN: 0040-4039

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 113:131683

AB A new procedure for the prepn. of alkenenitriles from Me<sub>3</sub>SiCHClCN (I) and  
carbonyl compds. promoted by Zn is described. Thus, treatment of  
4-RC<sub>6</sub>H<sub>4</sub>CHO (R = H, Me, MeO, Cl, cyano) with I and Zn gave 4-RC<sub>6</sub>H<sub>4</sub>CH:CHCN  
as mixts. of E and Z isomers.

IT **62486-11-7P 64432-85-5P**

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)

L15 ANSWER 12 OF 34 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1990:422994 HCAPLUS

DOCUMENT NUMBER: 113:22994

TITLE: Studies on the effect of opposite terminal groups in  
phenylpolyenic conjugative systems

AUTHOR(S): Dai, Cuichen; Li, Guiying

CORPORATE SOURCE: Inst. Chem., Acad. Sin., Beijing, Peop. Rep. China

SOURCE: Acta Chimica Sinica (English Edition) (1989), (6),

527-37

CODEN: ACSIEW; ISSN: 0256-7660

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Seven homologous species  $p\text{-A:B-C}_6\text{H}_4(\text{CH:CH})_n\text{X:Y}$  ( $\text{A:B} = \text{NO}_2$ ,  $\text{X:Y} = \text{CHO}$ ,  $\text{COMe}$ ,  $\text{CN}$ ,  $\text{NO}_2$ ;  $\text{A:B} = \text{CN}$ ,  $\text{X:Y} = \text{CHO}$ ,  $\text{CN}$ ;  $\text{A:B} = \text{H}$ ,  $\text{X:Y} = \text{NO}_2$ ) were synthesized. The effect of opposite terminal groups in phenylpolyenic conjugative systems has been studied by means of UV, XPS,  $^{13}\text{C}$  NMR, and quantum chem. calcn. The results show that: 1. There exists the effect of opposite terminal groups in phenylpolyenic and other arom. conjugative systems. 2. When  $\text{A:B}$  and  $\text{X:Y}$  are the same, the group ( $-\text{X:Y}$ ) connected at polyenic chain is a terminal group, while the other is an opposite terminal group. When the two groups are different, the one with weaker conjugative power plays the role of the opposite terminal group. 3. The effect of opposite-terminal groups increases successively in the order of  $\text{CN}$ ,  $\text{COMe}$ ,  $\text{CHO}$ ,  $\text{NO}_2$  and can be quant. described with substitute equiv.  $\Delta\lambda_{\text{max}}$ . The  $\lambda_{\text{max}}$  of compd. contg. an opposite terminal group can be calcd. by the homologous equation  $10^{-4} \sim \nu = a+b/(1/2)^2/N'-S_a$ , most of the calcd. values are in agreement with expt. results.

IT 127826-36-2P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(prepn. and spectra of)

IT 127826-41-9

RL: PRP (Properties)  
(spectra of)

L15 ANSWER 13 OF 34 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1989:632055 HCAPLUS

DOCUMENT NUMBER: 111:232055

TITLE: The application of elemento-organic compounds of the fifteenth and sixteenth groups in organic synthesis. Part 61. Synthesis of  $\alpha,\beta$ -unsaturated nitriles by reaction of haloacetonitrile with carbonyl compounds mediated by tributylstibine

AUTHOR(S): Huang, Yaozeng; Shen, Yanchang; Chen, Chen

CORPORATE SOURCE: Shanghai Inst. Org. Chem., Acad. Sin., Shanghai, Switz.

SOURCE: Synthetic Communications (1989), 19(1-2), 83-90

CODEN: SYNCAV; ISSN: 0039-7911

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 111:232055

AB Condensation reaction of  $\text{RCHO}$  [ $\text{R} = n\text{-pentyl}$ ,  $n\text{-octyl}$ ,  $(\text{E})\text{-Me}(\text{CH}_2)_6\text{CH:CH}$ ,  $(\text{E})\text{-PhCH:CH}$ , 2-furyl, 2-thienyl, Ph,  $p\text{-ClC}_6\text{H}_4$ ] with  $\text{ClCH}_2\text{CN}$  in the presence of  $\text{Bu}_3\text{Sb}$  gave 74-97%  $\text{RCH:CHCN}$  as E- and Z-mixts. Cyclopentanone and cyclohexanone also reacted to give the corresponding (cyanomethylene)cycloalkanes.

IT 53649-66-4P 110729-75-4P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)

L15 ANSWER 14 OF 34 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1989:480290 HCAPLUS

DOCUMENT NUMBER: 111:80290

TITLE: Palladium-catalyzed vinylation of activated alkenes with  $\alpha,\beta$ -unsaturated acid chlorides

AUTHOR(S): Kasahara, Akira; Izumi, Taeko; Kudou, Naoto; Azami, Hiroshi; Yamamoto, Shinzi

CORPORATE SOURCE: Fac. Eng., Yamagata Univ., Yonezawa, 992, Japan

SOURCE: Yamagata Daigaku Kiyo, Kogaku (1988), 20(2), 125-39

CODEN: YDKKAR; ISSN: 0513-465X

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Unsatd. acid chlorides [cinnamoyl, fumaroyl, 3-(ethoxycarbonyl)acryloyl, 5-phenyl-2,4-pentadienoyl, and 2,4-hexadienoyl chlorides] reacted with styrene, Et acrylate, acrylonitrile, Me vinyl ketone, methacrolein, Me methacrylate, and Me crotonate in the presence of Bu<sub>3</sub>N, trioctylamine, iso-PrNEtH, PhCH<sub>2</sub>NMe<sub>2</sub>, or N-ethylmorpholine (best) and a Pd compd. [bis(dibenzylideneacetato)palladium preferred] to give conjugated dienes or trienes. The reaction involved a highly efficient decarbonylation of the acid chlorides.

IT **53649-66-4P 110729-75-4P**

RL: IMF (Industrial manufacture); PREP (Preparation)  
(prepn. of, using cinnamoyl chloride as vinylation agent in presence of palladium catalysts)

L15 ANSWER 15 OF 34 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1988:167071 HCAPLUS

DOCUMENT NUMBER: 108:167071

TITLE: Sodium telluride-mediated carbon-carbon bond-forming reactions

AUTHOR(S): Suzuki, Hitomi; Manabe, Hajime; Inouye, Masahiko

CORPORATE SOURCE: Fac. Sci., Ehime Univ., Matsuyama, 790, Japan

SOURCE: Nippon Kagaku Kaishi (1987), (7), 1485-9

CODEN: NKAKB8; ISSN: 0369-4577

DOCUMENT TYPE: Journal

LANGUAGE: Japanese

OTHER SOURCE(S): CASREACT 108:167071

AB Na<sub>2</sub>Te, prepd. by heating Te and NaH in a 1:2 molar ratio in dry Me<sub>2</sub>NCHO, readily debrominates BrCH<sub>2</sub>CO<sub>2</sub>R (R = Me, Et) at low temps. to generate the enolate anions, which undergo a Reformatskii-type reaction with various nonenolizable aldehydes (e.g., PhCHO) to give the corresponding .alpha.,.beta.-unsatd. esters (e.g., PhCH:CHCO<sub>2</sub>R) in good to moderate yields. BrCH<sub>2</sub>CN and ClCH<sub>2</sub>CN react similarly to afford .alpha.,.beta.-unsatd. nitriles in moderate yields. Although the results are unsatisfactory with BrCH<sub>2</sub>CON(CHMe<sub>2</sub>)<sub>2</sub>, CCl<sub>3</sub>CONEt<sub>2</sub> gives the N,N-diethyl-.beta.-aryl-.alpha.-oxopropionamide with piperonal. Upon similar treatment, 4-NCC<sub>6</sub>H<sub>4</sub>CH<sub>2</sub>Br condenses with piperonal to give 4'-cyano-3,4-(methylenedioxy)stilbene among other products.

IT **62486-11-7P 64432-85-5P**

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)

L15 ANSWER 16 OF 34 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1987:575620 HCAPLUS

DOCUMENT NUMBER: 107:175620

TITLE: A facile preparation of 5-phenylpenta-2,4-dienenitriles

AUTHOR(S): Shibata, Katsuyoshi; Kondo, Hidehito; Urano, Katsuyoshi; Matsui, Masaki

CORPORATE SOURCE: Fac. Eng., Gifu Univ., Gifu, 501-11, Japan

SOURCE: Chemistry Express (1987), 2(2), 117-20

CODEN: CHEXEU; ISSN: 0911-9566

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 107:175620

AB Cinnamaldehydes in the presence of superoxide ion in acetonitrile under ultrasound irradiation afforded 5-phenylpenta-2,4-dienenitriles in good yields. Distribution of the (2E) and (2Z) isomers was explained by the conformation of the precursor.

IT **53649-66-4P 110729-75-4P**

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)

L15 ANSWER 17 OF 34 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1987:477283 HCAPLUS

DOCUMENT NUMBER: 107:77283  
 TITLE: Stereospecific synthesis of 2,4-dienoic acid derivatives from vinylmercuric chlorides and acrylic acid derivatives by palladium(II) salt  
 AUTHOR(S): Kim, Jin Il; Lee, Jong Tae  
 CORPORATE SOURCE: Dep. Ind. Chem., Hanyang Univ., Seoul, 133, S. Korea  
 SOURCE: Bulletin of the Korean Chemical Society (1986), 7(6), 472-7  
 CODEN: BKCSDE; ISSN: 0253-2964  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB The alkenylation of R1CH:CR2R3 (R1 = H, Me; R2 = H, Me; R3 = CO2H, cyano, Ph) by R4CR5:CHHgCl (R4 = alkyl, CO2H, Ph; R5 = H, Me), LiPdCl3, and CuCl2 gave R4CR5:CHCR1:CR2R3.  
 IT **53649-66-4P**  
 RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. of)

L15 ANSWER 18 OF 34 HCAPLUS COPYRIGHT 2002 ACS  
 ACCESSION NUMBER: 1986:478376 HCAPLUS  
 DOCUMENT NUMBER: 105:78376  
 TITLE: Structural effect of .pi.-electron excessive conjugative groups  
 AUTHOR(S): Tai, Tsuichen; Hu, Weixiao; Chiang, Mingchien  
 CORPORATE SOURCE: Inst. Chem., Acad. Sin., Beijing, Peop. Rep. China  
 SOURCE: Fenzi Kexue Yu Huaxue Yanjiu (1985), 5(2), 141-51  
 CODEN: FKYYDG  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Chinese  
 AB The structural effects of .pi.-electron excessive groups R (R = NH2, NMe2, NHAc, SMe, SEt, SH, OMe, OEt, OBu, O2CMe) on electronic spectra of 18 conjugated homologous polyenic, arom. polyenic, and polyphenyl systems (200 compds.) were detd.  
 IT **14164-31-9**  
 RL: PRP (Properties) (electronic spectra of)

L15 ANSWER 19 OF 34 HCAPLUS COPYRIGHT 2002 ACS  
 ACCESSION NUMBER: 1986:206308 HCAPLUS  
 DOCUMENT NUMBER: 104:206308  
 TITLE: A general allylation procedure using trimethylallylsilane and fluoride catalysis  
 AUTHOR(S): Majetich, George; Casares, Ada; Chapman, David; Behnke, Mark  
 CORPORATE SOURCE: Sch. Chem. Sci., Univ. Georgia, Athens, GA, 30602, USA  
 SOURCE: Journal of Organic Chemistry (1986), 51(10), 1745-53  
 CODEN: JOCEAH; ISSN: 0022-3263  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 104:206308  
 AB The relative effectiveness for conjugate addn. of lithium diallylcuprate and Lewis acid or fluoride ion catalyzed addn. of trimethylallylsilane was compared by using a variety of Michael acceptors of differing electrophilicity and steric bulk. Conjugate allylation using trimethylallylsilane and fluoride catalysis is far more general than traditional procedures and clearly superior for allylation of .alpha.,.beta.-unsatd. esters and nitriles. This method also afforded exclusively the 1,4-adduct in allylation reactions with polyene esters and nitriles, in contrast to cuprates, which preferred 1,6-conjugate addn. The Hosomi Sakurai allylation procedure (Lewis acid catalyzed addn. of trimethylallylsilane) was effective only for conjugated enones or doubly activated Michael acceptors. As expected, allylations using lithium diallylcuprate were severely substrate dependent.



IT 53649-66-4

RL: RCT (Reactant); RACT (Reactant or reagent)  
(allylation of, with allyltrimethylsilane in presence of fluoride on)

L15 ANSWER 20 OF 34 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1984:5756 HCAPLUS

DOCUMENT NUMBER: 100:5756

TITLE: Chemoselectivity in the conjugate addition of  
allylsilane to Michael acceptors

AUTHOR(S): Majetich, George; Casares, Ada M.; Chapman, D.;  
Behnke, M.

CORPORATE SOURCE: Dep. Chem., Univ. Georgia, Athens, GA, 30602, USA

SOURCE: Tetrahedron Letters (1983), 24(18), 1909-12

CODEN: TELEAY; ISSN: 0040-4039

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The allylic carbanion species generated by treatment of  $\text{CH}_2\text{:CHCH}_2\text{SiMe}_3$  (I) with  $\text{F}^-$  underwent highly chemoselective conjugated addn. to a series of Michael acceptors for which alternative known allylation procedures were less general. E.g., allylation of  $\text{PhCH:CHCO}_2\text{Me}$  (II) with  $\text{I/F}^-$  gave 90%  $\text{PhCH}(\text{CH}_2\text{CO}_2\text{Me})\text{CH}_2\text{CH:CH}_2$  (III), whereas allylation of II with  $\text{Li}(\text{CH}_2\text{CH:CH}_2)_2\text{Cu}$  gave only 61% III and with  $\text{I-TiCl}_4$ , allylation failed to occur.

IT 14164-31-9

RL: RCT (Reactant); RACT (Reactant or reagent)  
(conjugate addn. reaction of, with allylsilane, fluoride ion-catalyzed,  
chemoselectivity in)

L15 ANSWER 21 OF 34 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1983:88685 HCAPLUS

DOCUMENT NUMBER: 98:88685

TITLE: Structural effect in branched conjugated systems -  
bifurcation-type of branched polyenic nitriles,  
carboxylic acids and esters

AUTHOR(S): Dai, Cuichen; Yu, Zhenjie; Jiang, Mingqian

CORPORATE SOURCE: Inst. Chem., Acad. Sin., Beijing, Peop. Rep. China

SOURCE: Scientia Sinica, Series B: Chemical, Biological,  
Agricultural, Medical & Earth Sciences (English  
Edition) (1982), 25(10), 1021-34

CODEN: SSBSEF; ISSN: 0253-5823

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The UV spectra and NMR chem. shifts of the homologous series  $\text{Me}(\text{CH:CH})_n\text{CH:C}(\text{CN})\text{CO}_2\text{Et}$  ( $n = 0, 1, 3, 5$ ),  $\text{Ph}(\text{CH:CH})_n\text{CH:C}(\text{CN})\text{R}$  ( $n = 0, 1, 2, 3, 5$ ;  $\text{R} = \text{CN}, \text{CO}_2\text{Et}$ ), and  $\text{Ph}(\text{CH:CH})_n\text{CH:CR}_2$  ( $\text{R} = \text{CO}_2\text{H}, n = 1, 3, 5$ ;  $\text{R} = \text{CO}_2\text{Et}, n = 0, 1, 3, 5$ ) conformed to the rule of homologous linearity. In all of these branched compds., a red shift in the UV spectra was obsd. upon introduction of electron-attracting branching groups. Mass spectra indicate that CN groups are more strongly conjugated with the polyenic chain than are  $\text{CO}_2\text{Et}$  groups. Substituent effects of branching groups were calcd. by the method of similar triangles.

IT 14164-31-9

RL: PRP (Properties)  
(UV spectrum of)

L15 ANSWER 22 OF 34 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1982:472098 HCAPLUS

DOCUMENT NUMBER: 97:72098

TITLE: Benzene or naphthalene alkenyl carboxylic acid  
derivatives

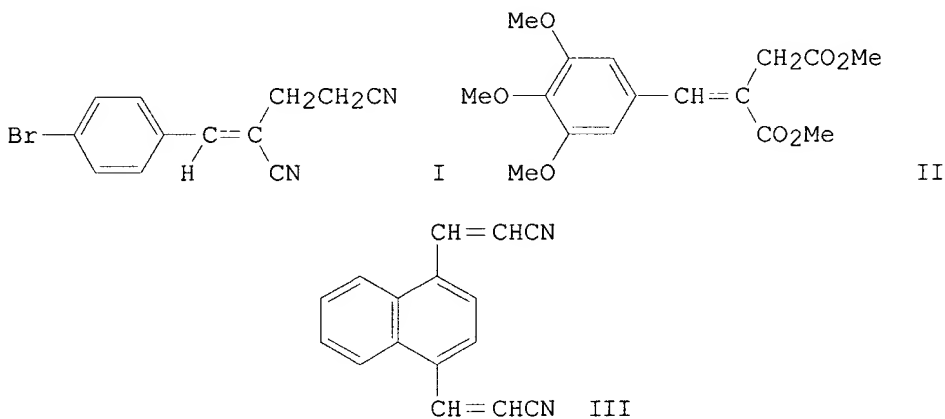
INVENTOR(S): Blaser, Hans Ulrich; Reinehr, Dieter; Spencer, Alwyn

PATENT ASSIGNEE(S): Ciba-Geigy A.-G., Switz.

SOURCE: Eur. Pat. Appl., 50 pp.

DOCUMENT TYPE:	CODEN: EPXXDW
LANGUAGE:	Patent
FAMILY ACC. NUM. COUNT:	German
PATENT INFORMATION:	1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 40177	A1	19811118	EP 1981-810178	19810507
EP 40177	B1	19830720		
R: BE, CH, DE, FR, GB				
US 4335054	A	19820615	US 1981-262000	19810508
CA 1178295	A1	19841120	CA 1981-377368	19810512
JP 57007436	A2	19820114	JP 1981-70855	19810513
JP 01054337	B4	19891117		
PRIORITY APPLN. INFO.:			CH 1980-3732	19800513
GI				



AB    Z[(CH:CH)mCR1:CR2]n [m = 0 or 1; n = 1 and Z = aryl or naphthyl or n = 2 and Z = arylene or naphthylene; R = H, CH<sub>2</sub>CO<sub>2</sub>R<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CN; R<sub>1</sub> = H or (if m = 0 and n = 1) cyano, C1-4 alkyl, CO<sub>2</sub>R<sub>3</sub> (R or R<sub>1</sub> must be H); R<sub>2</sub> = cyano, CO<sub>2</sub>R<sub>3</sub>, CONR<sub>3</sub>, COR<sub>3</sub>; R<sub>3</sub> = C1-12 alkyl or Ph] were prepd. by decarbonylation-addn. reaction of olefinic acid derivs. with aroyl halides in the presence of a Pd compd. and a base, esp. an amine; .apprx.80 compds. were prepd. Thus, 3.51 g BzCl, 3.125 g CH<sub>2</sub>:CHCO<sub>2</sub>Et, 5.79 g Bu<sub>3</sub>N, 0.0561 g Pd(OAc)<sub>2</sub>, and 50 mL PhMe were stirred 4 h at 100.degree. until CO evolution was complete to give 66% Et cinnamate. Also prepd. were, e.g., I-III.

IT 81069-73-0P 81069-74-1P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)

L15 ANSWER 23 OF 34 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1982:180289 HCAPLUS

DOCUMENT NUMBER: 96:180289

TITLE: Structural effect in cross conjugative systems. IV.  
Properties of .alpha.-carboxyphenylpolyenic cyanides  
and the quantum chemical calculation of orbital energy  
and bond order

AUTHOR(S): Liang, Desheng; Lai, Chugen; Chiang, Mingchien  
CORPORATE SOURCE: Inst. Chem., Acad. Sin., Shanghai, Peop. Rep. China  
SOURCE: Fenzi Kexue Xuebao (1981-1982) (1981), 1(1), 17-30

CODEN: FKXUDX; ISSN: 0253-3677

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

AB all-trans-Ph(CH:CH)<sub>n</sub>CH:C(CN)CO<sub>2</sub>H (I) are prepd. and their UV and mass spectra are obsd. The MO, .pi.-energy differences, and .pi.-bond orders of I are calcd. by CNDO/2. The properties of I are correctly calcd. by using the extended form of the homologous equation for the corresponding linear conjugated system (.omega.-phenylpolyenic nitriles) with an .alpha.-CO<sub>2</sub>H group substituent. Cross-conjugated systems may be generally treated by allowing 1 of the 2 branches to become the terminal group of a linear conjugated system while the other branch becomes the substituent.

IT **53649-66-4P**

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. and bond order and UV of, MO calcn. of)

L15 ANSWER 24 OF 34 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1979:474188 HCAPLUS

DOCUMENT NUMBER: 91:74188

TITLE: A simple preparation of trimethylsilylacetonitrile and a novel ring opening of epoxides with trimethylsilylacetonitrile anion

AUTHOR(S): Matsuda, Isamu; Murata, Shizuaki; Ishii, Yoshio

CORPORATE SOURCE: Dep. Synth. Chem., Nagoya Univ., Nagoya, Japan

SOURCE: Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1972-1999) (1979), (1), 26-30

CODEN: JCPRB4; ISSN: 0300-922X

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Me<sub>3</sub>SiCH<sub>2</sub>CN (I) was prepd. (81%) from BrCH<sub>2</sub>CN by treatment in C<sub>6</sub>H<sub>6</sub>-THF with Me<sub>3</sub>SiCl and Zn (reflux, 16 h). I- with 1 equiv RCOR<sub>1</sub> [R = Ph, PhCH:CH, R<sub>1</sub> = H; RR<sub>1</sub> = (CH<sub>2</sub>)<sub>5</sub>] (THF, -78.degree.) gave 73-95% RCR<sub>1</sub>:CHCN. I- with epoxides gave .gamma.-trimethylsiloxy nitriles which were readily transformed into .gamma.-lactones with HCl in aq. MeOH.

IT **14164-31-9P**

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of, from carbonyl compd. and (trimethylsilyl)acetonitrile anion)

L15 ANSWER 25 OF 34 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1977:600756 HCAPLUS

DOCUMENT NUMBER: 87:200756

TITLE: Selective alkylation and deselenenylation of cyanomethyl phenyl selenide in aqueous medium, and an application to 1-cyanocyclopropene synthesis

AUTHOR(S): Masuyama, Yoshiro; Ueno, Yoshio; Okawara, Makoto

CORPORATE SOURCE: Res. Lab. Resour. Util., Tokyo Inst. Technol., Tokyo, Japan

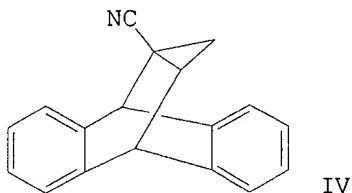
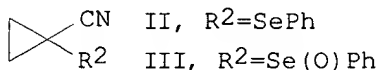
SOURCE: Chemistry Letters (1977), (7), 835-8

CODEN: CMLTAG; ISSN: 0366-7022

DOCUMENT TYPE: Journal

LANGUAGE: English

GI



AB PhSeCH<sub>2</sub>CN (I) was alkylated with RCH<sub>2</sub>X [R = Me, Me(CH<sub>2</sub>)<sub>7</sub>, PhCH<sub>2</sub>, PhCH:CHCH<sub>2</sub>; X = halo] to give PhSeCH(CN)CH<sub>2</sub>R, which was further alkylated with R<sub>1</sub>X (R<sub>1</sub> = H, PhCH<sub>2</sub>; X = halo) to give PhSeCR<sub>1</sub>(CN)CH<sub>2</sub>R. This was deselenated with N-halosuccinimides to give RCH:CR<sub>1</sub>CN and PhSeOH. For example, I and BrCH<sub>2</sub>CH<sub>2</sub>Br gave II, which was oxidized with NaIO<sub>4</sub> to give III. III was heated in xylene 6 h at 140.degree. to form 1-cyano-1-cyclopropene, which was trapped by anthracene to give IV.

IT **62486-11-7P 64432-85-5P**

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)

L15 ANSWER 26 OF 34 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1977:139581 HCAPLUS

DOCUMENT NUMBER: 86:139581

TITLE: A stereoselective synthesis of trans-2-alkenenitriles

AUTHOR(S): Loupy, Andre; Sogadji, Koffi; Seyden-Penne, Jacqueline

CORPORATE SOURCE: Groupe Lab., CNRS, Thiais, Fr.

SOURCE: Synthesis (1977), (2), 126-7

CODEN: SYNTBF; ISSN: 0039-7881

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Reaction of Ph<sub>2</sub>P(O)CH<sub>2</sub>CN with aldehydes or MeCOPh in THF contg. Me<sub>3</sub>COK at room temp. gave >90% trans-alkenenitrile with .gtoreq.90% selectivity, e.g., E-RC<sub>6</sub>H<sub>4</sub>CH:CHCN (R = H, p-MeO, p-Cl, m-O<sub>2</sub>N), PhCH:CHCH:CHCN, and E-PhCMe:CHCN. The selectivity was .apprx.75% from isobut anal.

IT **62486-11-7P**

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)

L15 ANSWER 27 OF 34 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1975:156187 HCAPLUS

DOCUMENT NUMBER: 82:156187

TITLE: Preparation of 3-substituted 5-amino-1,2,4-oxadiazoles from amidoximes with cyanogen bromide

AUTHOR(S): Dost, Johannes; Leisner, Rudi

CORPORATE SOURCE: Sekt. Chem./Biol., Paedagog. Hochsch. "Wolfgang Ratke", Koethen, E. Ger.

SOURCE: Z. Chem. (1975), 15(2), 57

CODEN: ZECEAL

DOCUMENT TYPE: Journal

LANGUAGE: German

GI For diagram(s), see printed CA Issue.

AB Oxadiazoles I (R = Me, Ph, PhCH<sub>2</sub>, PhCH:CH, Ph(CH:CH)<sub>2</sub>, Me<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>CH:CH, HO<sub>2</sub>CCH<sub>2</sub>, PhCH:CHCH:C(CO<sub>2</sub>R<sub>1</sub>), MeOC<sub>6</sub>H<sub>4</sub>CH:C(CO<sub>2</sub>R<sub>1</sub>), Me<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>CH:C(CO<sub>2</sub>R<sub>1</sub>), R<sub>1</sub> = H, R) were prepd. in 60-5% yield by treating RC(:NOH)NH<sub>2</sub> with BrCN. RC(:NOH)NH<sub>2</sub> were prepd. from RCN and NH<sub>2</sub>OH.

IT **14164-31-9**

RL: RCT (Reactant)  
(reaction of, with hydroxylamine)

L15 ANSWER 28 OF 34 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1974:491144 HCAPLUS

DOCUMENT NUMBER: 81:91144

TITLE: Synthesis of conjugated dienes using cobalt acetylene complexes

AUTHOR(S): Khand, Ihsan U.; Pauson, Peter L.

CORPORATE SOURCE: Dep. Pure Appl. Chem., Univ. Strathclyde, Glasgow, Scot.

SOURCE: J. Chem. Soc., Chem. Commun. (1974), (10), 379

CODEN: JCCCAT

DOCUMENT TYPE: Journal

LANGUAGE: English  
 AB Et crotonate (I), crotonaldehyde, and acrylonitrile reacted with (phenyl-acetylene)hexacarbonyldicobalt to give conjugated dienes. E.g., I gave 45% PhCH:CHCMe:CHCO<sub>2</sub>Et.  
 IT **53649-66-4P**  
 RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. of)

L15 ANSWER 29 OF 34 HCAPLUS COPYRIGHT 2002 ACS  
 ACCESSION NUMBER: 1974:29709 HCAPLUS  
 DOCUMENT NUMBER: 80:29709  
 TITLE: Synergistic corrosion inhibitors for steel  
 INVENTOR(S): Costain, Winston; Terry, Bernard W. H.  
 PATENT ASSIGNEE(S): Imperial Chemical Industries Ltd.  
 SOURCE: Ger. Offen., 11 pp. Addn. to Ger. Offen. 2,147,847 (CA 77:82988e).  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2311171	A1	19730913	DE 1973-2311171	19730307
GB 1417555	A	19751210	GB 1972-10724	19730305
US 3854959	A	19741217	US 1973-338526	19730306
NL 7303191	A	19730911	NL 1973-3191	19730307
FR 2175149	A2	19731019	FR 1973-8176	19730307
BE 796487	A4	19730910	BE 1973-128554	19730308
JP 48102043	A2	19731221	JP 1973-27552	19730308
PRIORITY APPLN. INFO.:			GB 1972-10724	19720308
			BE 1971-772782	19710917

AB Compns. contg. PhCH:CHR (I) [R = CN (II) or CH:CHCN] and I [R = CH:NOH or CHO (III)] or morpholine had a synergistically inhibiting effect on steel corrosion. Thus, soft steel samples were immersed 24 hr in 14% HCl contg. 0.25% II and 0.025% III at 85.degree.. The wt. loss was 0.84% vs. 67.0 and 76.0% for solns. contg. 0.5% II or 0.5% III alone, resp.  
 IT **14164-31-9**  
 RL: USES (Uses) (corrosion inhibitors contg., for steel)

L15 ANSWER 30 OF 34 HCAPLUS COPYRIGHT 2002 ACS  
 ACCESSION NUMBER: 1972:513982 HCAPLUS  
 DOCUMENT NUMBER: 77:113982  
 TITLE: Synthesis and some properties of vinylogs of p-bis(alkoxycarbonyl)-, p-dicyano-, and p-diaroylbenzenes  
 AUTHOR(S): Grinev, G. V.; Dombrovskii, V. A.; Yanovskaya, L. A.  
 CORPORATE SOURCE: Inst. Org. Khim. im. Zelinskogo, Moscow, USSR  
 SOURCE: Izv. Akad. Nauk SSSR, Ser. Khim. (1972), (3), 635-7  
 CODEN: IASKA6  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian  
 AB (EtO)2P(O)CH2R (I, R = CO2R1, CN, Bz, COC6H4Me-p, R1 = Me, Et, Pr) (II, R = CO2Et) in DMF was treated with EtONa, EtOH and terephthalaldehyde to give p-C6H4[(CH:CH)nR]2 (III, n = 1, R = CO2Et). Similarly, II and p-bis(2-formylvinyl)benzene gave III (n = 2, R = CO2Et). Similarly were prepd. III (n = 1, 2, R = Bz, CN, CO2Me, CO2Pr, COC6H4Me-p). Their ir and uv spectra were given. The diketones had lower extinction coeffs. than did the analogous esters due to nonplanar mol. forms.  
 IT **38862-55-4P**  
 RL: SPN (Synthetic preparation); PREP (Preparation)

(prepn. of)

L15 ANSWER 31 OF 34 HCAPLUS COPYRIGHT 2002 ACS  
 ACCESSION NUMBER: 1972:482988 HCAPLUS  
 DOCUMENT NUMBER: 77:82988  
 TITLE: Inhibition of steel corrosion by using acidic organic  
 nitro compounds  
 INVENTOR(S): Costain, Winston; Terry, Bernard W. H.  
 PATENT ASSIGNEE(S): Imperial Chemical Industries Ltd.  
 SOURCE: Ger. Offen., 19 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2147847	A1	19720330	DE 1971-2147847	19710924
GB 1365291	A	19740829	GB 1971-7807	19710325
ZA 7106110	A	19720531	ZA 1971-6110	19710913
CA 963647	A1	19750304	CA 1971-122707	19710913
NO 131896	B	19750512	NO 1971-3399	19710913
BE 772782	A1	19720317	BE 1971-108315	19710917
IL 37748	A1	19741231	IL 1971-37748	19710917
IT 939022	A	19730210	IT 1971-28952	19710922
AU 7133836	A1	19730329	AU 1971-33836	19710923
NL 7113205	A	19720328	NL 1971-13205	19710924
FR 2107997	A5	19720512	FR 1971-34544	19710924
FR 2107997	B1	19750718		
SE 383002	B	19760223	SE 1971-12125	19710924
ES 395432	A1	19740916	ES 1971-395432	19710925
US 3876371	A	19750408	US 1974-436351	19740124
PRIORITY APPLN. INFO.:			GB 1970-45814	A 19700925
			GB 1971-7807	A 19710325
			US 1971-180231	A1 19710913

AB Acidic org. nitro compds. are proposed as steel corrosion inhibitors. Thus, a 25-35 g steel test piece provided with a 9.5 mm diam. hole is placed into a 20.3 .times. 2.5 cm glass cylinder which is provided with a water-cooled condenser for refluxing of test fluid: 30 g adipic acid + 1 g solid or liq. inhibitor compd., and 1 ml distd. H2O. The mixt. is placed in a Woods-metal bath and heated 50 hr at 240 .+- 10.degree.. The test piece was weighed before as well as after being treated in the corrosive fluid. Some test pieces were pretreated by using 2 wt.%/vol. of an inhibitor compd. dissolved in an appropriate solvent at its b.p. and cooled during 24 hr. Metal-free phthalocyanine in quinoline soln. showed 49 ppm corrosion wt. loss compared to 10,165 ppm wt. loss in a noninhibited corrosive soln. Some oxime and dioxime contg. compds. gave similar results. Among numerous examples cinnamionitrile, crotononitrile, cinnamaldoxime, and acetophenone oxime act well as inhibitors in acidic media with or without pretreatment of the steel surface.

IT 14164-31-9

RL: PRP (Properties)

(in corrosion prevention, of stainless steel by hydrochloric acid)

L15 ANSWER 32 OF 34 HCAPLUS COPYRIGHT 2002 ACS  
 ACCESSION NUMBER: 1971:462772 HCAPLUS  
 DOCUMENT NUMBER: 75:62772  
 TITLE: Reactions of aryl Grignard reagents with pyridine  
 1-oxide. Structure of the addition products  
 AUTHOR(S): Kellogg, Richard M.; Van Bergen, T. J.  
 CORPORATE SOURCE: Dep. Org. Chem., Dep. Org. Chem., Univ. Zernikelaan,  
 Groningen, Neth.

SOURCE: J. Org. Chem. (1971), 36(12), 1705-8  
 CODEN: JOCEAH  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 GI For diagram(s), see printed CA Issue.  
 AB 5-Aryl-cis-2,trans-4-pentadienal syn-oximes (I) are prepd. by the addn. of pyridine 1-oxide to Grignards ArMgBr or ArMgI, where Ar is Ph, a substituted phenyl group, or 2-thienyl. Mixts. of the I and Ac2O are refluxed to give 2-arylpyridines (II). The I are treated with p-MeC6H4SO2Cl to give nitriles ArCH:CHCH:CHCN.  
 IT **14164-31-9P 28541-53-9P 28541-54-0P**  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of)

L15 ANSWER 33 OF 34 HCAPLUS COPYRIGHT 2002 ACS  
 ACCESSION NUMBER: 1969:57371 HCAPLUS  
 DOCUMENT NUMBER: 70:57371  
 TITLE: Cinnamylideneacetonitrile  
 INVENTOR(S): Kato, Tetsuzo; Yamanaka, Hiroshi  
 PATENT ASSIGNEE(S): Kowa Co., Ltd.  
 SOURCE: Jpn. Tokkyo Koho, 3 pp.  
 CODEN: JAXXAD  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 43024903	B4	19681028	JP	19660919

AB Manuf. of the title compd. (I) by reaction of 1-hydroxy-2-phenyl-1,2-dihydropyridine (II) with benzoyl halide in the presence of a dehydrohalogenating agent in a substantially anhyd. solvent is described. In an example, 0.91 g. BzCl is added to a soln. of 0.86 g. II in 4 ml. pyridine, the mixt. warmed at 40-50.degree. 3 hrs., ice flakes added, and the mixt. extd. with Et2O to give 0.73 g. I, b. 106-7.degree..  
 IT **14164-31-9P**  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of)

L15 ANSWER 34 OF 34 HCAPLUS COPYRIGHT 2002 ACS  
 ACCESSION NUMBER: 1968:21804 HCAPLUS  
 DOCUMENT NUMBER: 68:21804  
 TITLE: Ring-opening reaction of 1-hydroxy-2-phenyl-1,2-dihydropyridine and related compounds  
 AUTHOR(S): Kato, Tetsuzo; Yamanaka, Hiroshi; Adachi, Takeshi; Hiranuma, Hidetoshi  
 CORPORATE SOURCE: Sch. Med., Tohoku Univ., Sendai, Japan  
 SOURCE: J. Org. Chem. (1967), 32(12), 3788-90  
 CODEN: JOCEAH  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 GI For diagram(s), see printed CA Issue.  
 AB Treatment of 1-hydroxy-2-phenyl-1,2-dihydropyridine (I, R = H) with an equimolar amt. of BzCl in dry pyridine affords cinnamylideneacetonitrile quant. When the reaction is carried out under ice cooling, 1-benzoyloxy-2-phenyl-1,2-dihydropyridine (I, R = Bz) is obtained which, on standing at room temp., transforms into the isomer cinnamylidene-acetaldehyde oxime benzoate. 6 references.  
 IT **14164-31-9P**  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of)

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FILE 'CAOLD' ENTERED AT 20:24:58 ON 13 DEC 2002

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FILE LAST UPDATED: 01 May 1997 (19970501/UP)

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This file supports REGISTRY for direct browsing and searching of all substance data from the REGISTRY file. Enter HELP FIRST for more information.

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L16 2 L14

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=&gt; d all l16 1-2

L16 ANSWER 1 OF 2 CAOLD COPYRIGHT 2002 ACS

AN CA54:15320c CAOLD

TI reaction of phosphine ylides with carbonyl compds.

PA Badische Anilin- &amp; Soda-Fabrik Akt.-Ges.

DT Patent

PATENT NO. KIND DATE

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PI GB 813539

DE 971986

US 3078256

1963

IT 821-00-1 1099-45-2 1515-78-2 1552-95-0 1560-54-9 1884-48-6

1884-57-7 2396-84-1 3029-41-2 3049-35-2 3290-53-7 4336-70-3

**14164-31-9** 15935-94-1 16640-68-9 16721-45-2 17577-28-5

18480-24-5 19834-52-7 25361-54-0 35684-10-7 38821-11-3 56013-01-5

58626-63-4 87424-79-1 92251-23-5 101548-30-5 102462-56-6 102892-18-2

103169-93-3 103272-14-6 106423-29-4 111383-73-4 119570-75-1 121499-56-7

L16 ANSWER 2 OF 2 CAOLD COPYRIGHT 2002 ACS

AN CA51:6337d CAOLD

TI alteration of the ultraviolet absorption spectra of intramol. polarized conjugated systems by proton exchange with alcs. as solvents at normal and low temp.

AU Lauerer, Dorothea; Coenen, M.; Pestemer, M.; Scheibe, G.

IT 120-47-8 1620-98-0 2286-29-5 3293-92-3 3943-97-3 6935-44-0

10537-47-0 17315-86-5 22014-02-4 24293-93-4 32444-63-6 55367-73-2

**100381-42-8** 101111-94-8 102552-66-9



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STRUCTURE FILE UPDATES: 12 DEC 2002 HIGHEST RN 476148-76-2  
DICTIONARY FILE UPDATES: 12 DEC 2002 HIGHEST RN 476148-76-2

TSCA INFORMATION NOW CURRENT THROUGH MAY 20, 2002

Please note that search-term pricing does apply when  
conducting SmartSELECT searches.

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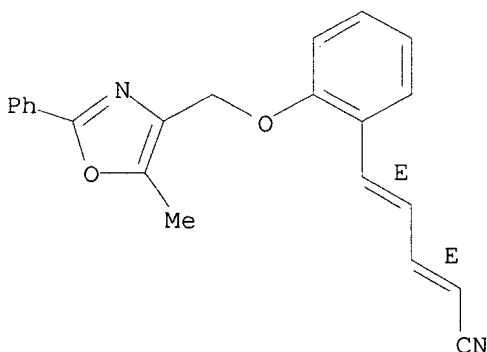
Experimental and calculated property data are now available. See HELP  
PROPERTIES for more information. See STNote 27, Searching Properties  
in the CAS Registry File, for complete details:  
<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

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=> d ide can 114 1-30

L14 ANSWER 1 OF 30 REGISTRY COPYRIGHT 2002 ACS  
RN 421558-47-6 REGISTRY  
CN 2,4-Pentadienenitrile, 5-[2-[(5-methyl-2-phenyl-4-oxazolyl)methoxy]phenyl]-  
, (2E,4E)- (9CI) (CA INDEX NAME)  
FS STEREOSEARCH  
MF C22 H18 N2 O2  
SR CA  
LC STN Files: CA, CAPLUS

Double bond geometry as shown.



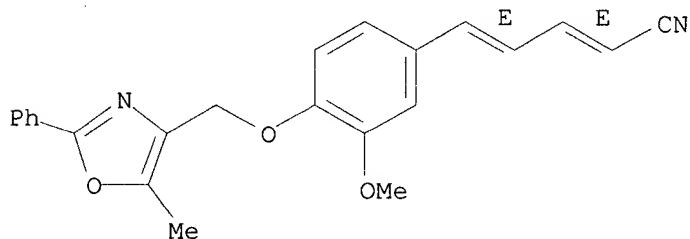
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1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 136:350405

L14 ANSWER 2 OF 30 REGISTRY COPYRIGHT 2002 ACS  
 RN 421558-46-5 REGISTRY  
 CN 2,4-Pentadienenitrile, 5-[3-methoxy-4-[(5-methyl-2-phenyl-4-oxazolyl)methoxy]phenyl]-, (2E,4E)- (9CI) (CA INDEX NAME)  
 FS STEREOSEARCH  
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 SR CA  
 LC STN Files: CA, CAPLUS

Double bond geometry as shown.



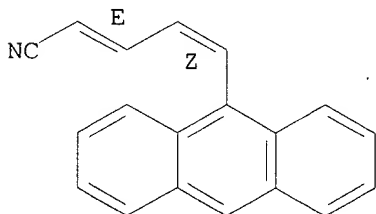
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REFERENCE 1: 136:350405

L14 ANSWER 3 OF 30 REGISTRY COPYRIGHT 2002 ACS  
 RN 339048-02-1 REGISTRY  
 CN 2,4-Pentadienenitrile, 5-(9-anthracenyl)-, (2E,4Z)- (9CI) (CA INDEX NAME)  
 FS STEREOSEARCH  
 MF C19 H13 N  
 SR CA  
 LC STN Files: CA, CAPLUS

Double bond geometry as shown.



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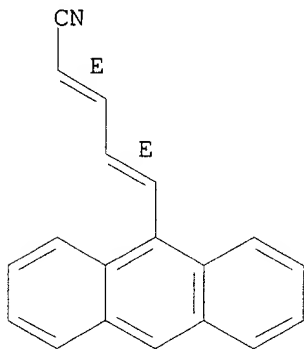
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REFERENCE 1: 134:359390

L14 ANSWER 4 OF 30 REGISTRY COPYRIGHT 2002 ACS  
 RN 339047-96-0 REGISTRY

CN 2,4-Pentadienenitrile, 5-(9-anthracenyl)-, (2E,4E)- (9CI) (CA INDEX NAME)  
 FS STEREOSEARCH  
 MF C19 H13 N  
 SR CA  
 LC STN Files: CA, CAPLUS

Double bond geometry as shown.



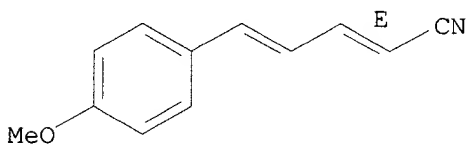
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1 REFERENCES IN FILE CA (1962 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 134:359390

L14 ANSWER 5 OF 30 REGISTRY COPYRIGHT 2002 ACS  
 RN 213532-41-3 REGISTRY  
 CN 2,4-Pentadienenitrile, 5-(4-methoxyphenyl)-, (2E)- (9CI) (CA INDEX NAME)  
 FS STEREOSEARCH  
 MF C12 H11 N O  
 SR CA  
 LC STN Files: CA, CAPLUS

Double bond geometry as described by E or Z.



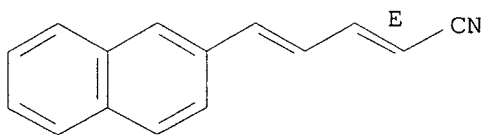
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 1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 129:259958

L14 ANSWER 6 OF 30 REGISTRY COPYRIGHT 2002 ACS  
 RN 213532-38-8 REGISTRY  
 CN 2,4-Pentadienenitrile, 5-(2-naphthalenyl)-, (2E)- (9CI) (CA INDEX NAME)  
 FS STEREOSEARCH  
 MF C15 H11 N  
 SR CA  
 LC STN Files: CA, CAPLUS

Double bond geometry as described by E or Z.



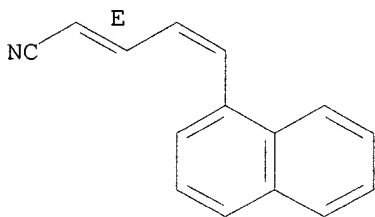
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REFERENCE 1: 129:259958

L14 ANSWER 7 OF 30 REGISTRY COPYRIGHT 2002 ACS  
RN 213532-37-7 REGISTRY  
CN 2,4-Pentadienenitrile, 5-(1-naphthalenyl)-, (2E)- (9CI) (CA INDEX NAME)  
FS STEREOSEARCH  
MF C15 H11 N  
SR CA  
LC STN Files: CA, CAPLUS

Double bond geometry as described by E or Z.



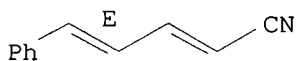
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REFERENCE 1: 129:259958

L14 ANSWER 8 OF 30 REGISTRY COPYRIGHT 2002 ACS  
RN 209622-32-2 REGISTRY  
CN 2,4-Pentadienenitrile, 5-phenyl-, (4E)- (9CI) (CA INDEX NAME)  
FS STEREOSEARCH  
MF C11 H9 N  
SR CA  
LC STN Files: CA, CAPLUS

Double bond geometry as described by E or Z.



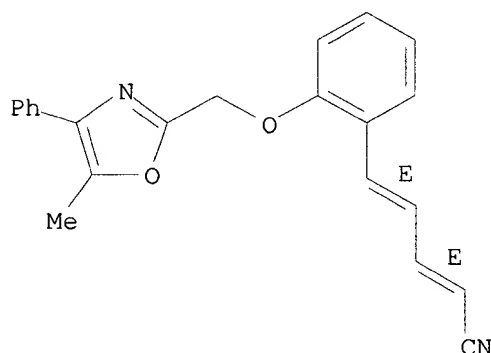
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1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 129:95677

L14 ANSWER 9 OF 30 REGISTRY COPYRIGHT 2002 ACS  
RN 166253-83-4 REGISTRY  
CN 2,4-Pentadienenitrile, 5-[2-[(5-methyl-4-phenyl-2-oxazolyl)methoxy]phenyl]-  
, (E,E)- (9CI) (CA INDEX NAME)  
FS STEREOSEARCH  
MF C22 H18 N2 O2  
SR CA  
LC STN Files: CA, CAPLUS, USPATFULL

Double bond geometry as shown.



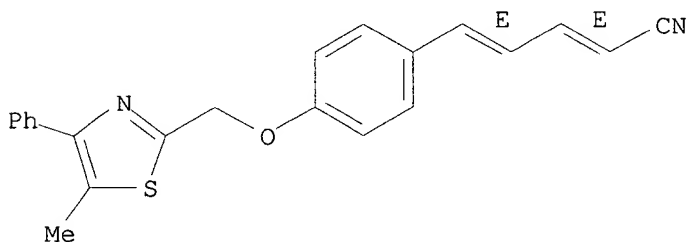
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1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 123:143900

L14 ANSWER 11 OF 30 REGISTRY COPYRIGHT 2002 ACS  
RN 166253-64-1 REGISTRY  
CN 2,4-Pentadienenitrile, 5-[4-[(5-methyl-4-phenyl-2-thiazolyl)methoxy]phenyl]-, (E,E)- (9CI) (CA INDEX NAME)  
FS STEREOSEARCH  
MF C22 H18 N2 O S  
SR CA  
LC STN Files: CA, CAPLUS, USPATFULL

Double bond geometry as shown.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

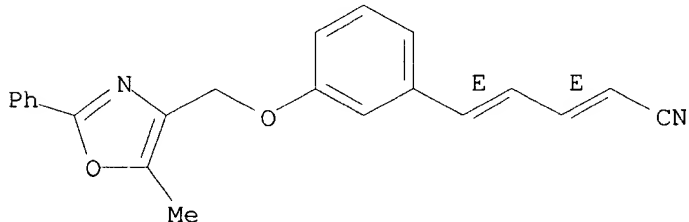
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REFERENCE 1: 136:37609

REFERENCE 2: 123:143900

L14 ANSWER 12 OF 30 REGISTRY COPYRIGHT 2002 ACS  
RN 166253-59-4 REGISTRY  
CN 2,4-Pentadienenitrile, 5-[3-[(5-methyl-2-phenyl-4-oxazolyl)methoxy]phenyl]-, (E,E)- (9CI) (CA INDEX NAME)  
FS STEREOSEARCH  
MF C22 H18 N2 O2  
SR CA  
LC STN Files: CA, CAPLUS, USPATFULL

Double bond geometry as shown.



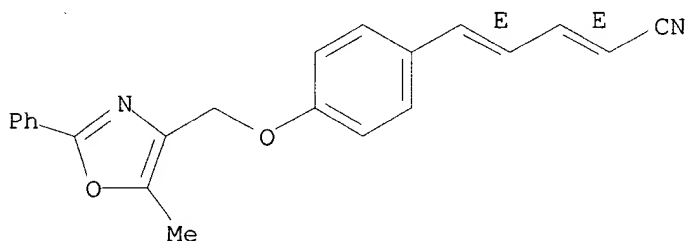
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1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 123:143900

L14 ANSWER 13 OF 30 REGISTRY COPYRIGHT 2002 ACS  
RN 166253-45-8 REGISTRY  
CN 2,4-Pentadienenitrile, 5-[4-[(5-methyl-2-phenyl-4-oxazolyl)methoxy]phenyl]-  
, (2E,4E)- (9CI) (CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN 2,4-Pentadienenitrile, 5-[4-[(5-methyl-2-phenyl-4-oxazolyl)methoxy]phenyl]-  
, (E,E)-  
FS STEREOSEARCH  
MF C22 H18 N2 O2  
SR CA  
LC STN Files: CA, CAPLUS, USPATFULL

Double bond geometry as shown.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

3 REFERENCES IN FILE CA (1962 TO DATE)  
3 REFERENCES IN FILE CAPLUS (1962 TO DATE)

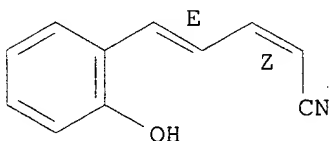
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REFERENCE 2: 136:37609

REFERENCE 3: 123:143900

L14 ANSWER 14 OF 30 REGISTRY COPYRIGHT 2002 ACS  
RN 143661-18-1 REGISTRY  
CN 2,4-Pentadienenitrile, 5-(2-hydroxyphenyl)-, (Z,E)- (9CI) (CA INDEX NAME)  
FS STEREOSEARCH  
MF C11 H9 N O  
SR CA  
LC STN Files: CA, CAPLUS

Double bond geometry as shown.



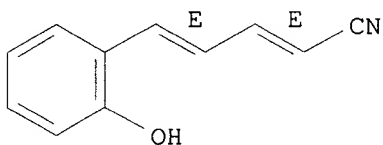
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1 REFERENCES IN FILE CA (1962 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 117:171149

L14 ANSWER 15 OF 30 REGISTRY COPYRIGHT 2002 ACS  
RN 143661-14-7 REGISTRY  
CN 2,4-Pentadienenitrile, 5-(2-hydroxyphenyl)-, (E,E)- (9CI) (CA INDEX NAME)  
FS STEREOSEARCH  
MF C11 H9 N O  
SR CA  
LC STN Files: CA, CAPLUS

Double bond geometry as shown.



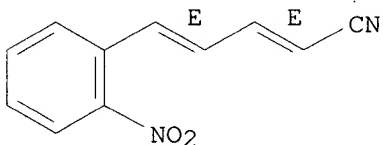
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1 REFERENCES IN FILE CA (1962 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 117:171149

L14 ANSWER 16 OF 30 REGISTRY COPYRIGHT 2002 ACS  
RN 133505-29-0 REGISTRY  
CN 2,4-Pentadienenitrile, 5-(2-nitrophenyl)-, (E,E)- (9CI) (CA INDEX NAME)  
FS STEREOSEARCH  
MF C11 H8 N2 O2  
SR CA  
LC STN Files: CA, CAPLUS

Double bond geometry as shown.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

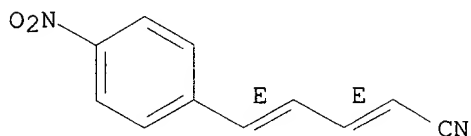
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1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 114:206702

L14 ANSWER 17 OF 30 REGISTRY COPYRIGHT 2002 ACS  
RN 133505-28-9 REGISTRY  
CN 2,4-Pentadienenitrile, 5-(4-nitrophenyl)-, (E,E)- (9CI) (CA INDEX NAME)  
FS STEREOSEARCH  
MF C11 H8 N2 O2  
SR CA  
LC STN Files: CA, CAPLUS, CASREACT



Double bond geometry as shown.

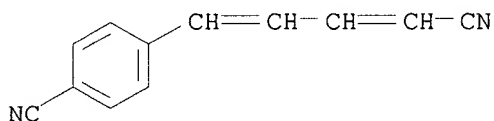


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1962 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 114:206702

L14 ANSWER 18 OF 30 REGISTRY COPYRIGHT 2002 ACS  
RN 127826-41-9 REGISTRY  
CN Benzonitrile, 4-(4-cyano-1,3-butadienyl)- (9CI) (CA INDEX NAME)  
FS 3D CONCORD  
MF C12 H8 N2  
SR CA  
LC STN Files: CA, CAPLUS

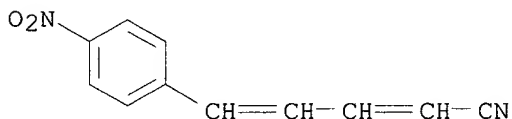


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1 REFERENCES IN FILE CA (1962 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 113:22994

L14 ANSWER 19 OF 30 REGISTRY COPYRIGHT 2002 ACS  
RN 127826-36-2 REGISTRY  
CN 2,4-Pentadienenitrile, 5-(4-nitrophenyl)- (9CI) (CA INDEX NAME)  
FS 3D CONCORD  
MF C11 H8 N2 O2  
SR CA  
LC STN Files: CA, CAPLUS



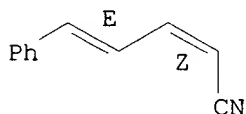
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1962 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 113:22994

L14 ANSWER 20 OF 30 REGISTRY COPYRIGHT 2002 ACS  
 RN 110729-75-4 REGISTRY  
 CN 2,4-Pentadienenitrile, 5-phenyl-, (2Z,4E)- (9CI) (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN 2,4-Pentadienenitrile, 5-phenyl-, (Z,E)-  
 FS STEREOSEARCH  
 MF C11 H9 N  
 SR CA  
 LC STN Files: BEILSTEIN\*, CA, CAPLUS, CASREACT  
 (\*File contains numerically searchable property data)

Double bond geometry as shown.

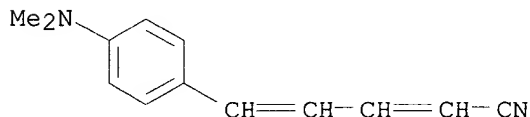


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

4 REFERENCES IN FILE CA (1962 TO DATE)  
 4 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:5970  
 REFERENCE 2: 111:232055  
 REFERENCE 3: 111:80290  
 REFERENCE 4: 107:175620

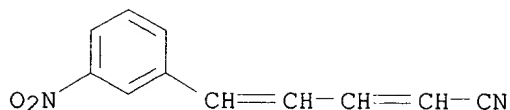
L14 ANSWER 21 OF 30 REGISTRY COPYRIGHT 2002 ACS  
 RN 100381-42-8 REGISTRY  
 CN 2,4-Pentadienenitrile, 5-(p-dimethylaminophenyl)- (6CI) (CA INDEX NAME)  
 FS 3D CONCORD  
 MF C13 H14 N2  
 SR CAOLD  
 LC STN Files: BEILSTEIN\*, CAOLD  
 (\*File contains numerically searchable property data)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L14 ANSWER 22 OF 30 REGISTRY COPYRIGHT 2002 ACS  
 RN 81069-74-1 REGISTRY  
 CN 2,4-Pentadienenitrile, 5-(3-nitrophenyl)- (9CI) (CA INDEX NAME)  
 FS 3D CONCORD  
 MF C11 H8 N2 O2  
 LC STN Files: CA, CAPLUS, USPATFULL

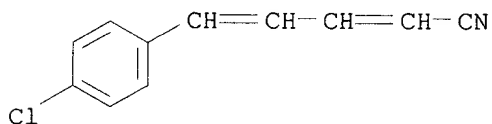


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1962 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 97:72098

L14 ANSWER 23 OF 30 REGISTRY COPYRIGHT 2002 ACS  
RN 81069-73-0 REGISTRY  
CN 2,4-Pentadienenitrile, 5-(4-chlorophenyl)- (9CI) (CA INDEX NAME)  
FS 3D CONCORD  
MF C11 H8 Cl N  
LC STN Files: CA, CAPLUS, USPATFULL



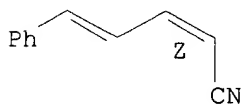
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1962 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 97:72098

L14 ANSWER 24 OF 30 REGISTRY COPYRIGHT 2002 ACS  
RN 64432-85-5 REGISTRY  
CN 2,4-Pentadienenitrile, 5-phenyl-, (Z,?)- (9CI) (CA INDEX NAME)  
FS STEREOSEARCH  
MF C11 H9 N  
LC STN Files: BEILSTEIN\*, CA, CAPLUS, CASREACT  
(\*File contains numerically searchable property data)

Double bond geometry as described by E or Z.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

3 REFERENCES IN FILE CA (1962 TO DATE)  
3 REFERENCES IN FILE CAPLUS (1962 TO DATE)

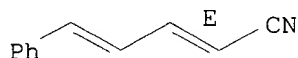
REFERENCE 1: 113:131683

REFERENCE 2: 108:167071

REFERENCE 3: 87:200756

L14 ANSWER 25 OF 30 REGISTRY COPYRIGHT 2002 ACS  
 RN 62486-11-7 REGISTRY  
 CN 2,4-Pentadienenitrile, 5-phenyl-, (2E)- (9CI) (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN 2,4-Pentadienenitrile, 5-phenyl-, (E,?)-  
 FS STEREOSEARCH  
 MF C11 H9 N  
 LC STN Files: BEILSTEIN\*, CA, CAPLUS, CASREACT  
 (\*File contains numerically searchable property data)

Double bond geometry as described by E or Z.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

5 REFERENCES IN FILE CA (1962 TO DATE)  
 5 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 129:259958

REFERENCE 2: 113:131683

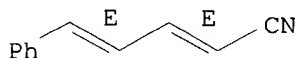
REFERENCE 3: 108:167071

REFERENCE 4: 87:200756

REFERENCE 5: 86:139581

L14 ANSWER 26 OF 30 REGISTRY COPYRIGHT 2002 ACS  
 RN 53649-66-4 REGISTRY  
 CN 2,4-Pentadienenitrile, 5-phenyl-, (2E,4E)- (9CI) (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN 2,4-Pentadienenitrile, 5-phenyl-, (E,E)-  
 FS STEREOSEARCH  
 MF C11 H9 N  
 LC STN Files: BEILSTEIN\*, CA, CAPLUS, CASREACT  
 (\*File contains numerically searchable property data)

Double bond geometry as shown.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

9 REFERENCES IN FILE CA (1962 TO DATE)  
 9 REFERENCES IN FILE CAPLUS (1962 TO DATE)

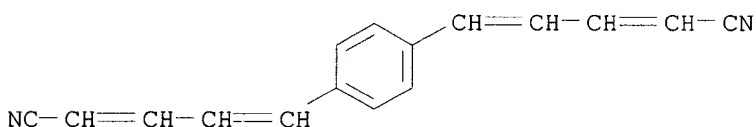
REFERENCE 1: 137:5970

REFERENCE 2: 114:206702

REFERENCE 3: 111:232055

REFERENCE 4: 111:80290  
 REFERENCE 5: 107:175620  
 REFERENCE 6: 107:77283  
 REFERENCE 7: 104:206308  
 REFERENCE 8: 96:180289  
 REFERENCE 9: 81:91144

L14 ANSWER 27 OF 30 REGISTRY COPYRIGHT 2002 ACS  
 RN 38862-55-4 REGISTRY  
 CN 2,4-Pentadienenitrile, 5,5'-(1,4-phenylene)bis- (9CI) (CA INDEX NAME)  
 FS 3D CONCORD  
 MF C16 H12 N2  
 LC STN Files: BEILSTEIN\*, CA, CAPLUS  
 (\*File contains numerically searchable property data)

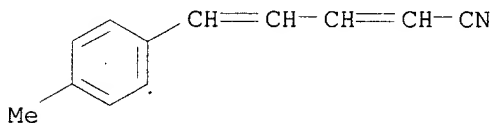


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1962 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 77:113982

L14 ANSWER 28 OF 30 REGISTRY COPYRIGHT 2002 ACS  
 RN 28541-54-0 REGISTRY  
 CN 2,4-Pentadienenitrile, 5-p-tolyl- (8CI) (CA INDEX NAME)  
 FS 3D CONCORD  
 MF C12 H11 N  
 LC STN Files: BEILSTEIN\*, CA, CAPLUS  
 (\*File contains numerically searchable property data)



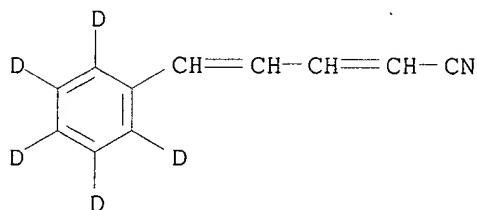
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1962 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 75:62772

L14 ANSWER 29 OF 30 REGISTRY COPYRIGHT 2002 ACS  
 RN 28541-53-9 REGISTRY  
 CN 2,4-Pentadienenitrile, 5-(phenyl-d5)- (8CI, 9CI) (CA INDEX NAME)

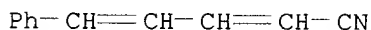
MF C11 H4 D5 N  
 LC STN Files: BEILSTEIN\*, CA, CAPLUS  
 (\*File contains numerically searchable property data)



1 REFERENCES IN FILE CA (1962 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 75:62772

L14 ANSWER 30 OF 30 REGISTRY COPYRIGHT 2002 ACS  
 RN 14164-31-9 REGISTRY  
 CN 2,4-Pentadienenitrile, 5-phenyl- (6CI, 8CI, 9CI) (CA INDEX NAME)  
 OTHER NAMES:  
 CN 1-Cyano-4-phenylbutadiene  
 CN 5-Phenylpenta-2,4-dienenitrile  
 FS 3D CONCORD  
 MF C11 H9 N  
 LC STN Files: AGRICOLA, BEILSTEIN\*, CA, CAOLD, CAPLUS, CASREACT, IFICDB,  
 IFIPAT, IFIUDB, USPATFULL  
 (\*File contains numerically searchable property data)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

11 REFERENCES IN FILE CA (1962 TO DATE)  
 11 REFERENCES IN FILE CAPLUS (1962 TO DATE)  
 1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 124:288399

REFERENCE 2: 105:78376

REFERENCE 3: 100:5756

REFERENCE 4: 98:88685

REFERENCE 5: 91:74188

REFERENCE 6: 82:156187

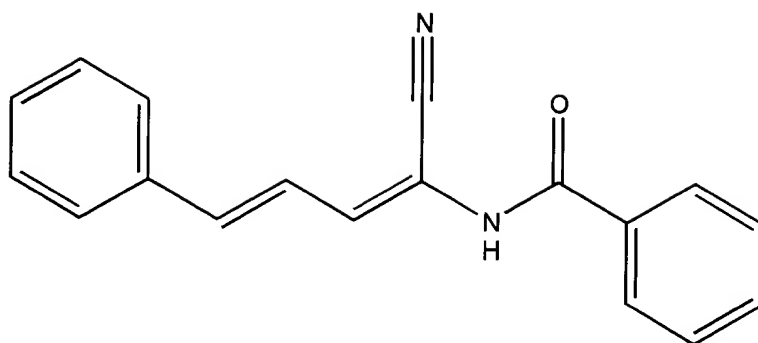
REFERENCE 7: 80:29709

REFERENCE 8: 77:82988

REFERENCE 9: 75:62772

REFERENCE 10: 70:57371

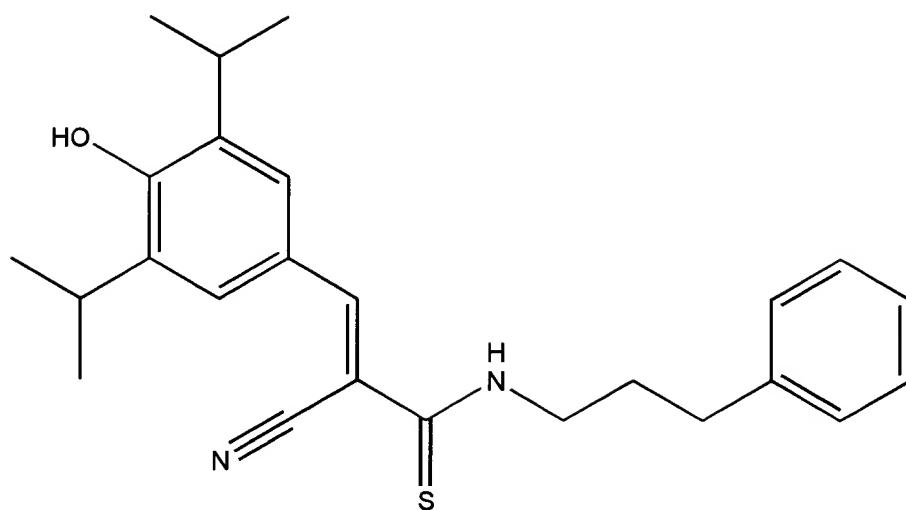
Sackey 09\_834728



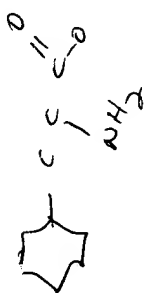
(E,E)-2-(benzylamido)-3-styrylacrylonitrile

159.00 →





(E)-2-[3-phenyl-n-propylaminothiocarbonyl]-3-(3,5-diisopropyl-4-hydroxyphenyl)acrylonitrile



Welcome to STN International! Enter x:x

LOGINID:sssptal200exs

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

\* \* \* \* \* Welcome to STN International \* \* \* \* \*

NEWS 1 Web Page URLs for STN Seminar Schedule - N. America  
NEWS 2 Apr 08 "Ask CAS" for self-help around the clock  
NEWS 3 Apr 09 BEILSTEIN: Reload and Implementation of a New Subject Area  
NEWS 4 Apr 09 ZDB will be removed from STN  
NEWS 5 Apr 19 US Patent Applications available in IFICDB, IFIPAT, and  
IFIUDB  
NEWS 6 Apr 22 Records from IP.com available in CAPLUS, HCAPLUS, and  
ZCAPLUS  
NEWS 7 Apr 22 BIOSIS Gene Names now available in TOXCENTER  
NEWS 8 Apr 22 Federal Research in Progress (FEDRIP) now available  
NEWS 9 Jun 03 New e-mail delivery for search results now available  
NEWS 10 Jun 10 MEDLINE Reload  
NEWS 11 Jun 10 PCTFULL has been reloaded  
NEWS 12 Jul 02 FOREGE no longer contains STANDARDS file segment  
NEWS 13 Jul 22 USAN to be reloaded July 28, 2002;  
saved answer sets no longer valid  
NEWS 14 Jul 29 Enhanced polymer searching in REGISTRY  
NEWS 15 Jul 30 NETFIRST to be removed from STN  
NEWS 16 Aug 08 CANCERLIT reload  
NEWS 17 Aug 08 PHARMAMarketLetter(PHARMAML) - new on STN  
NEWS 18 Aug 08 NTIS has been reloaded and enhanced  
NEWS 19 Aug 19 Aquatic Toxicity Information Retrieval (AQUIRE)  
now available on STN  
NEWS 20 Aug 19 IFIPAT, IFICDB, and IFIUDB have been reloaded  
NEWS 21 Aug 19 The MEDLINE file segment of TOXCENTER has been reloaded  
NEWS 22 Aug 26 Sequence searching in REGISTRY enhanced  
NEWS 23 Sep 03 JAPIO has been reloaded and enhanced  
NEWS 24 Sep 16 Experimental properties added to the REGISTRY file  
NEWS 25 Sep 16 Indexing added to some pre-1967 records in CA/CAPLUS  
NEWS 26 Sep 16 CA Section Thesaurus available in CAPLUS and CA  
NEWS 27 Oct 01 CASREACT Enriched with Reactions from 1907 to 1985  
NEWS 28 Oct 21 EVENTLINE has been reloaded  
NEWS 29 Oct 24 BEILSTEIN adds new search fields  
NEWS 30 Oct 24 Nutraceuticals International (NUTRACEUT) now available on  
STN  
NEWS 31 Oct 25 MEDLINE SDI run of October 8, 2002  
NEWS 32 Nov 18 DKILIT has been renamed APOLLIT  
NEWS 33 Nov 25 More calculated properties added to REGISTRY  
NEWS 34 Dec 02 TIBKAT will be removed from STN  
NEWS 35 Dec 04 CSA files on STN

NEWS EXPRESS October 14 CURRENT WINDOWS VERSION IS V6.01,  
CURRENT MACINTOSH VERSION IS V6.0a(ENG) AND V6.0Ja(JP),

AND CURRENT DISCOVER FILE IS DATED 01 OCTOBER 2002

NEWS HOURS	STN Operating Hours Plus Help Desk Availability
NEWS INTER	General Internet Information
NEWS LOGIN	Welcome Banner and News Items
NEWS PHONE	Direct Dial and Telecommunication Network Access to STN
NEWS WWW	CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that specific topic.

All use of STN is subject to the provisions of the STN Customer agreement. Please note that this agreement limits use to scientific research. Use for software development or design or implementation of commercial gateways or other similar uses is prohibited and may result in loss of user privileges and other penalties.

\* \* \* \* \* STN Columbus \* \* \* \* \*

FILE 'HOME' ENTERED AT 08:21:39 ON 09 DEC 2002

=> file reg

COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
0.21	0.21

FULL ESTIMATED COST

FILE 'REGISTRY' ENTERED AT 08:21:50 ON 09 DEC 2002

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 8 DEC 2002 HIGHEST RN 475460-75-4  
DICTIONARY FILE UPDATES: 8 DEC 2002 HIGHEST RN 475460-75-4

TSCA INFORMATION NOW CURRENT THROUGH MAY 20, 2002

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP PROPERTIES for more information. See STNnote 27, Searching Properties in the CAS Registry File, for complete details:  
<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

=>

Uploading 09834728.str

L1 STRUCTURE UPLOADED

=> is ll

IS IS NOT A RECOGNIZED COMMAND

The previous command name entered was not recognized by the system.  
For a list of commands available to you in the current file, enter  
"HELP COMMANDS" at an arrow prompt (=>).

=> s ll

SAMPLE SEARCH INITIATED 08:22:24 FILE 'REGISTRY'  
SAMPLE SCREEN SEARCH COMPLETED - 22 TO ITERATE

100.0% PROCESSED 22 ITERATIONS 3 ANSWERS  
SEARCH TIME: 00.00.01

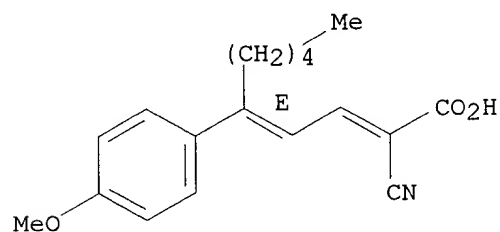
FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*  
BATCH \*\*COMPLETE\*\*  
PROJECTED ITERATIONS: 159 TO 721  
PROJECTED ANSWERS: 3 TO 163

L2 3 SEA SSS SAM L1

=> d l2 1-2

L2 ANSWER 1 OF 3 REGISTRY COPYRIGHT 2002 ACS  
RN 153529-89-6 REGISTRY  
CN 2,4-Decadienoic acid, 2-cyano-5-(4-methoxyphenyl)-, (?E)- (9CI) (CA  
INDEX NAME)  
FS STEREOSEARCH  
MF C18 H21 N O3  
SR CA  
LC STN Files: CA, CAPLUS

Double bond geometry as described by E or Z.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

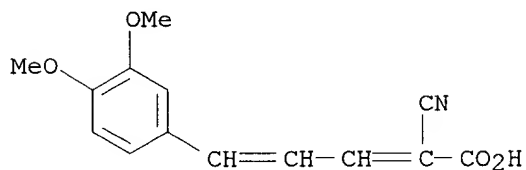
1 REFERENCES IN FILE CA (1962 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

L2 ANSWER 2 OF 3 REGISTRY COPYRIGHT 2002 ACS  
RN 134309-71-0 REGISTRY  
CN Benzeneacetic acid, .alpha.-amino-, methyl ester, (R)-,  
2-cyano-5-(3,4-dimethoxyphenyl)-2,4-pentadienoate (9CI) (CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN 2,4-Pentadienoic acid, 2-cyano-5-(3,4-dimethoxyphenyl)-, compd. with  
(R)-methyl .alpha.-aminobenzeneacetate (1:1) (9CI)

FS STEREOSEARCH  
MF C14 H13 N O4 . C9 H11 N O2  
SR CA  
LC STN Files: CA, CAPLUS, TOXCENTER

CM 1

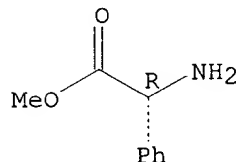
CRN 126057-98-5  
CMF C14 H13 N O4



CM 2

CRN 24461-61-8  
CMF C9 H11 N O2

Absolute stereochemistry. Rotation (-).



1 REFERENCES IN FILE CA (1962 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

=> s l1 full  
FULL SEARCH INITIATED 08:22:58 FILE 'REGISTRY'  
FULL SCREEN SEARCH COMPLETED - 324 TO ITERATE

100.0% PROCESSED 324 ITERATIONS  
SEARCH TIME: 00.00.01

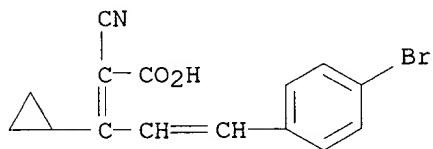
77 ANSWERS

L3 77 SEA SSS FUL L1

=> d l3 1-10

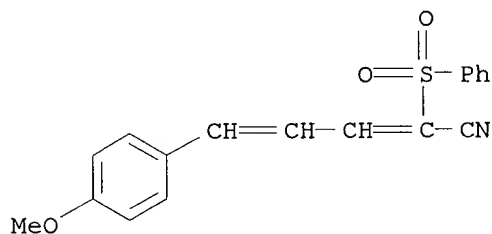
L3 ANSWER 1 OF 77 REGISTRY COPYRIGHT 2002 ACS  
RN 384808-51-9 REGISTRY  
CN 2,4-Pentadienoic acid, 5-(4-bromophenyl)-2-cyano-3-cyclopropyl- (9CI)  
(CA  
INDEX NAME)  
FS 3D CONCORD

MF C15 H12 Br N O2  
SR Chemical Library  
LC STN Files: CHEMCATS



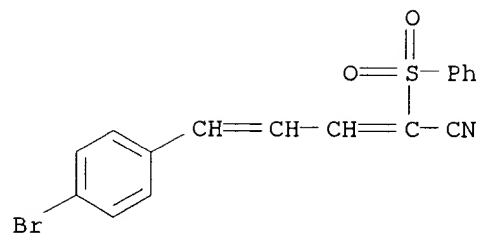
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

L3 ANSWER 2 OF 77 REGISTRY COPYRIGHT 2002 ACS  
RN 380622-84-4 REGISTRY  
CN 2,4-Pentadienenitrile, 5-(4-methoxyphenyl)-2-(phenylsulfonyl)- (9CI) (CA  
INDEX NAME)  
FS 3D CONCORD  
MF C18 H15 N O3 S  
SR Chemical Library  
LC STN Files: CHEMCATS



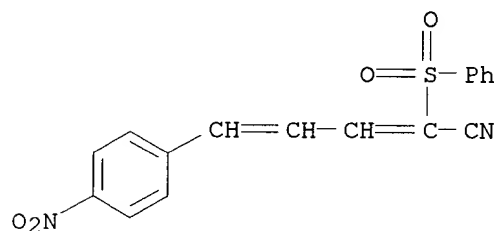
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

L3 ANSWER 3 OF 77 REGISTRY COPYRIGHT 2002 ACS  
RN 380622-83-3 REGISTRY  
CN 2,4-Pentadienenitrile, 5-(4-bromophenyl)-2-(phenylsulfonyl)- (9CI) (CA  
INDEX NAME)  
FS 3D CONCORD  
MF C17 H12 Br N O2 S  
SR Chemical Library  
LC STN Files: CHEMCATS



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

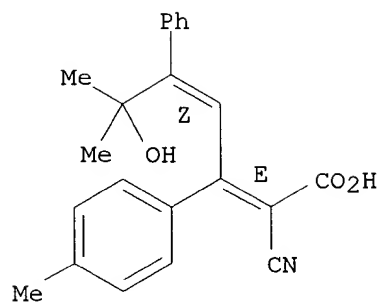
L3 ANSWER 4 OF 77 REGISTRY COPYRIGHT 2002 ACS  
 RN 380622-82-2 REGISTRY  
 CN 2,4-Pentadienenitrile, 5-(4-nitrophenyl)-2-(phenylsulfonyl)- (9CI) (CA INDEX NAME)  
 FS 3D CONCORD  
 MF C17 H12 N2 O4 S  
 SR Chemical Library  
 LC STN Files: CHEMCATS



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

L3 ANSWER 5 OF 77 REGISTRY COPYRIGHT 2002 ACS  
 RN 343568-74-1 REGISTRY  
 CN 2,4-Heptadienoic acid, 2-cyano-6-hydroxy-6-methyl-3-(4-methylphenyl)-5-phenyl-, (2E,4Z)- (9CI) (CA INDEX NAME)  
 FS STEREOSEARCH  
 MF C22 H21 N O3  
 SR Reaction Database

Double bond geometry as shown.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

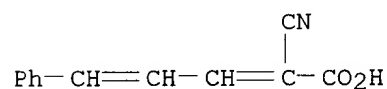
L3 ANSWER 6 OF 77 REGISTRY COPYRIGHT 2002 ACS  
 RN 336130-02-0 REGISTRY  
 CN 2-Propenoic acid, 2-methyl-, 6-[[4'-(2-hydroxyethoxy)[1,1'-biphenyl]-4-yl]oxy]hexyl ester, homopolymer, 2-cyano-5-phenyl-2,4-pentadienoate (9CI)  
 (CA INDEX NAME)

OTHER NAMES:

CN 4-(2-Hydroxyethoxy)-4'-(6'-biphenyloxyhexyl) methacrylate homopolymer  
 .alpha.-cyanocinnamylideneacetate ester  
 MF (C24 H30 O5)x . x C12 H9 N O2  
 PCT Polyacrylic  
 SR CA  
 LC STN Files: CA, CAPLUS

CM 1

CRN 24139-57-9  
 CMF C12 H9 N O2



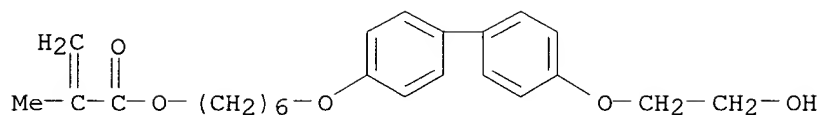
CM 2

CRN 229617-68-9  
 CMF (C24 H30 O5)x  
 CCI PMS

CM 3

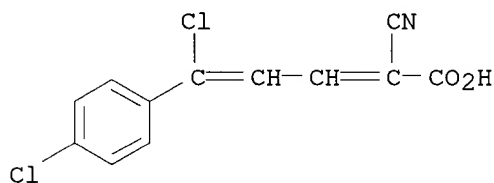
CRN 183234-70-0  
 CMF C24 H30 O5





1 REFERENCES IN FILE CA (1962 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

L3 ANSWER 7 OF 77 REGISTRY COPYRIGHT 2002 ACS  
RN 284493-92-1 REGISTRY  
CN 2,4-Pentadienoic acid, 5-chloro-5-(4-chlorophenyl)-2-cyano- (9CI) (CA INDEX NAME)  
FS 3D CONCORD  
MF C12 H7 Cl2 N O2  
SR Chemical Library  
LC STN Files: CHEMCATS



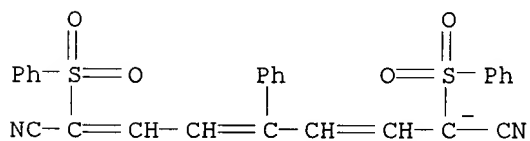
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

L3 ANSWER 8 OF 77 REGISTRY COPYRIGHT 2002 ACS  
RN 252912-67-7 REGISTRY  
CN 4,4'-Bipyridinium, 1,1'-bis(1-methylethyl)-, salt with 5-phenyl-2,8-bis(phenylsulfonyl)-2,4,6-nonatrienedinitrile (1:2) (9CI) (CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN 2,4,6-Nonatrienedinitrile, 5-phenyl-2,8-bis(phenylsulfonyl)-, ion(1-), 1,1'-bis(1-methylethyl)-4,4'-bipyridinium (2:1) (9CI)  
MF C27 H19 N2 O4 S2 . 1/2 C16 H22 N2  
SR CA  
LC STN Files: CA, CAPLUS

CM 1

CRN 252912-66-6

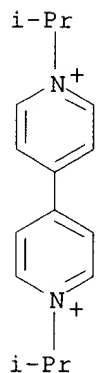
CMF C27 H19 N2 O4 S2



CM 2

CRN 46903-02-0

CMF C16 H22 N2



1 REFERENCES IN FILE CA (1962 TO DATE)

1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

L3 ANSWER 9 OF 77 REGISTRY COPYRIGHT 2002 ACS

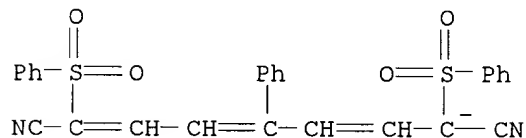
RN 252912-66-6 REGISTRY

CN 2,4,6-Nonatrienedinitrile, 5-phenyl-2,8-bis(phenylsulfonyl)-, ion(1-)  
(9CI) (CA INDEX NAME)

MF C27 H19 N2 O4 S2

CI COM

SR CA



L3 ANSWER 10 OF 77 REGISTRY COPYRIGHT 2002 ACS

RN 252912-65-5 REGISTRY

CN 4,4'-Bipyridinium, 1,1'-bis(1-methylethyl)-, salt with  
2,8-bis(methylsulfonyl)-5-phenyl-2,4,6-nonatrienedinitrile (1:2) (9CI)  
(CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 2,4,6-Nonatrienedinitrile, 2,8-bis(methylsulfonyl)-5-phenyl-, ion(1-),  
1,1'-bis(1-methylethyl)-4,4'-bipyridinium (2:1) (9CI)

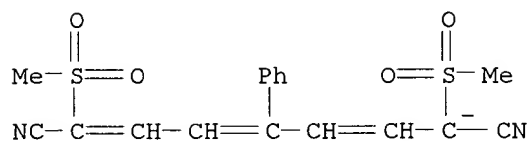
MF C17 H15 N2 O4 S2 . 1/2 C16 H22 N2

SR CA

LC STN Files: CA, CAPLUS

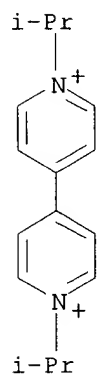
CM 1

CRN 252912-64-4  
CMF C17 H15 N2 O4 S2



CM 2

CRN 46903-02-0  
CMF C16 H22 N2



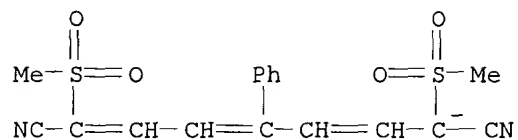
1 REFERENCES IN FILE CA (1962 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

=> d 13 10-15

L3 ANSWER 10 OF 77 REGISTRY COPYRIGHT 2002 ACS  
RN 252912-65-5 REGISTRY  
CN 4,4'-Bipyridinium, 1,1'-bis(1-methylethyl)-, salt with  
2,8-bis(methylsulfonyl)-5-phenyl-2,4,6-nonatrienedinitrile (1:2) (9CI)  
(CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN 2,4,6-Nonatrienedinitrile, 2,8-bis(methylsulfonyl)-5-phenyl-, ion(1-),  
1,1'-bis(1-methylethyl)-4,4'-bipyridinium (2:1) (9CI)  
MF C17 H15 N2 O4 S2 . 1/2 C16 H22 N2  
SR CA  
LC STN Files: CA, CAPLUS

CM 1

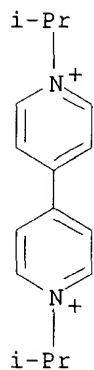
CRN 252912-64-4  
CMF C17 H15 N2 O4 S2



CM 2

CRN 46903-02-0

CMF C16 H22 N2



1 REFERENCES IN FILE CA (1962 TO DATE)

1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

L3 ANSWER 11 OF 77 REGISTRY COPYRIGHT 2002 ACS

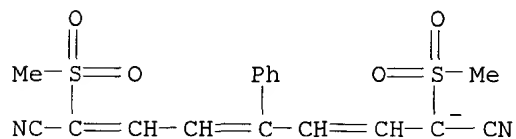
RN 252912-64-4 REGISTRY

CN 2,4,6-Nonatrienedinitrile, 2,8-bis(methylsulfonyl)-5-phenyl-, ion(1-)  
(9CI) (CA INDEX NAME)

MF C17 H15 N2 O4 S2

CI COM

SR CA



L3 ANSWER 12 OF 77 REGISTRY COPYRIGHT 2002 ACS

RN 196525-65-2 REGISTRY

CN 2,4-Pentadienoic acid, 2-cyano-5-phenyl-, polymer with  
2,2'-[oxybis[(methyl-2,1-ethanediyl)oxymethylene]]bis[oxirane] (9CI) (CA  
INDEX NAME)

OTHER CA INDEX NAMES:

CN .alpha.-Cyano-.beta.-styryl acrylic acid-Denacol EX 941 copolymer

CI	PMS
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
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97	97
98	98
99	99
100	100

PCT Epoxy resin, Polyacrylic, Polyether, Polystyrene

SR CA

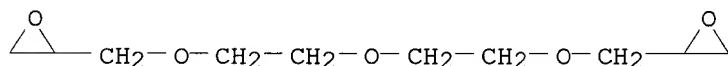
LC STN Files: CA, CAPLUS

CM 1

CRN 41638-13-5

CMF C12 H22 O5

CCI IDS



2 ( D1-Me )

CM 2

CRN 24139-57-9

CMF C12 H9 N O2



1 REFERENCES IN FILE CA (1962 TO DATE)

1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

L3 ANSWER 13 OF 77 REGISTRY COPYRIGHT 2002 ACS

RN 170274-87-0 REGISTRY

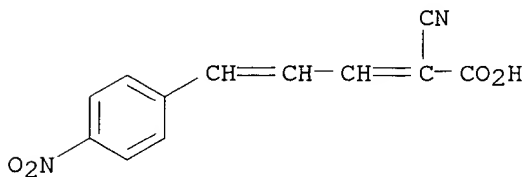
CN 2,4-Pentadienoic acid, 2-cyano-5-(4-nitrophenyl)- (9CI) (CA INDEX NAME)

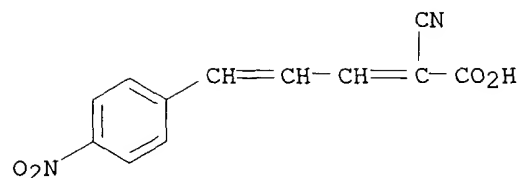
FS 3D CONCORD

MF C12 H8 N2 O4

SR CAS Registry Services

LC STN Files: CHEMLIST



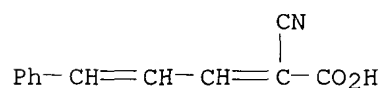


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

L3 ANSWER 14 OF 77 REGISTRY COPYRIGHT 2002 ACS  
 RN 163579-69-9 REGISTRY  
 CN Disilane, 1,2-dichloro-1,1,2,2-tetramethyl-, polymer with  
 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis[oxirane],  
 2-cyano-5-phenyl-2,4-pentadienoate (9CI) (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN Oxirane, 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis-,  
 polymer with 1,2-dichloro-1,1,2,2-tetramethyldisilane,  
 2-cyano-5-phenyl-2,4-pentadienoate (9CI)  
 MF (C21 H24 O4 . C4 H12 Cl2 Si2)x . x C12 H9 N O2  
 PCT Epoxy resin, Polyether, Polyether  
 SR CA  
 LC STN Files: CA, CAPLUS

CM 1

CRN 24139-57-9  
 CMF C12 H9 N O2

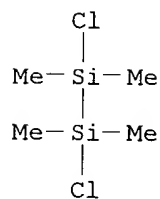


CM 2

CRN 151458-79-6  
 CMF (C21 H24 O4 . C4 H12 Cl2 Si2)x  
 CCI PMS

CM 3

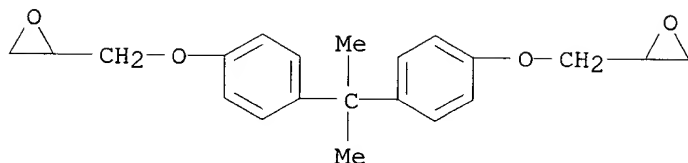
CRN 4342-61-4  
 CMF C4 H12 Cl2 Si2



CM 4

CRN 1675-54-3

CMF C21 H24 O4

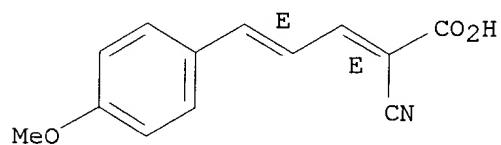


1 REFERENCES IN FILE CA (1962 TO DATE)

1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

L3 ANSWER 15 OF 77 REGISTRY COPYRIGHT 2002 ACS  
 RN 163440-59-3 REGISTRY  
 CN 2,4-Pentadienoic acid, 2-cyano-5-(4-methoxyphenyl)-, (E,E)- (9CI) (CA INDEX NAME)  
 FS STEREOSEARCH  
 MF C13 H11 N O3  
 CI COM  
 SR CA

Double bond geometry as shown.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

=> file caplus

COST IN U.S. DOLLARS

FULL ESTIMATED COST

SINCE FILE

ENTRY

170.24

TOTAL

SESSION

170.45

FILE 'CAPLUS' ENTERED AT 08:25:03 ON 09 DEC 2002

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FILE COVERS 1907 - 9 Dec 2002 VOL 137 ISS 24  
FILE LAST UPDATED: 8 Dec 2002 (20021208/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

CAS roles have been modified effective December 16, 2001. Please check your SDI profiles to see if they need to be revised. For information on CAS roles, enter HELP ROLES at an arrow prompt or use the CAS Roles thesaurus (/RL field) in this file.

=> s 13

L4 70 L3

=> s 14 and inhibiting cell proliferation or cancer

135512 INHIBITING

1598250 CELL

134687 PROLIFERATION

197 INHIBITING CELL PROLIFERATION

(INHIBITING(W)CELL(W)PROLIFERATION)

174654 CANCER

L5 174654 L4 AND INHIBITING CELL PROLIFERATION OR CANCER

=> s hematopoietic cancer

30607 HEMATOPOIETIC

174654 CANCER

L6 33 HEMATOPOIETIC CANCER

(HEMATOPOIETIC(W)CANCER)

=> s 14 and 16

L7 0 L4 AND L6

=> s 16 and 15

L8 33 L6 AND L5

=> s leukemia

L9 73957 LEUKEMIA

=> s 14 and 19

L10 0 L4 AND L9



=> s 19 and 15

L11 6868 L9 AND L5

=> s lymphoblastic leukemia or myelomonocyte leukemia or chronic myeloid leukemia

4750 LYMPHOBLASTIC  
73957 LEUKEMIA  
3588 LYMPHOBLASTIC LEUKEMIA  
(LYMPHOBLASTIC(W)LEUKEMIA)  
346 MYELOMONOCYTE  
73957 LEUKEMIA  
9 MYELOMONOCYTE LEUKEMIA  
(MYELOMONOCYTE(W)LEUKEMIA)  
146174 CHRONIC  
16205 MYELOID  
73957 LEUKEMIA  
1637 CHRONIC MYELOID LEUKEMIA  
(CHRONIC(W)MYELOID(W)LEUKEMIA)  
L12 5105 LYMPHOBLASTIC LEUKEMIA OR MYELOMONOCYTE LEUKEMIA OR CHRONIC  
MYELOID LEUKEMIA

=> s 14 and 112

L13 0 L4 AND L12

=> d 16 ibib abs hitstr 1-10

L6 ANSWER 1 OF 33 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2002:814445 CAPLUS

DOCUMENT NUMBER: 137:324230

TITLE: Fluorescein-labeled antibodies for quantifying  
antigen

expression, diagnosing disease and evaluating  
effectiveness of drug therapy

INVENTOR(S): Kawai, Shigeto; Iida, Shinichiro; Koishihara, Yasuo

PATENT ASSIGNEE(S): Chugai Seiyaku Kabushiki Kaisha, Japan

SOURCE: PCT Int. Appl., 91 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
WO 2002084290	A1	20021024	WO 2002-JP3703	20020412
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ,			
TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
PRIORITY APPLN. INFO.:			JP 2001-115889	A 20010413

AB Provided is a novel method of quantifying antigen expression. For example, a method of formulating the correlation between the expression dose of a desired antigen and the fluorescent intensity which involves: (a) the step of prepg. a plural no. of cell groups wherein the expression of the antigen has been preliminarily quantified; (b) the step of prepg.

a fluorescence-labeled antibody binding specifically to the antigen; (c) the step of measuring the fluorescent intensity of each cell group prepd. in (a) by using the fluorescence-labeled antibody prepd. in (b); and (d) analyzing the correlation between the expression dose of the antigen having been preliminarily quantified and the fluorescent intensities measured in (c). The method is esp. useful for quantifying tumor antigen such as HM1.24; for diagnosing and treating **hematopoietic cancer** such as bone marrow tumor, lymphatic system tumor and multiple myeloma; and for evaluating effectiveness of medicine on patients.

REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS

FORMAT RECORD. ALL CITATIONS AVAILABLE IN THE RE

L6 ANSWER 2 OF 33 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2002:607265 CAPLUS

DOCUMENT NUMBER: 137:167895

TITLE: The hematopoietic system-specific minor histocompatibility antigen HA-1 shows aberrant expression in epithelial cancer cells

AUTHOR(S): Klein, Christoph A.; Wilke, Martina; Pool, Jos; Vermeulen, Corine; Blokland, Els; Burghart, Elke; Krostina, Sabine; Wendler, Nicole; Passlick,

Bernward;

CORPORATE SOURCE: Riethmueller, Gert; Goulmy, Els  
Department of Immunology, Klinikum Innenstadt,  
Ludwig-Maximilians University, Munich, 80336, Germany  
SOURCE: Journal of Experimental Medicine (2002), 196(3),  
359-368

CODEN: JEMEAU; ISSN: 0022-1007

PUBLISHER: Rockefeller University Press

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Allogeneic stem cell transplantation (SCT) can induce curative graft-vs.-tumor reactions in patients with hematol. malignancies and solid tumors. The graft-vs.-tumor reaction after human histocompatibility leukocyte antigen (HLA)-identical SCT is mediated by alloimmune donor T cells specific for polymorphic minor histocompatibility antigens (mHags). Among these, the mHag HA-1 was found to be restricted to the hematopoietic system. Here, we report on the HA-1 RNA expression by microdissected carcinoma tissues and by single disseminated tumor cells isolated from patients with various epithelial tumors. The HA-1 peptide is molecularly defined, as it forms an immunogenic peptide ligand with HLA-A2 on the cell membrane of carcinoma cell lines. HA-1-specific cytotoxic T cells lyse epithelial tumor cell lines in vitro, whereas normal epithelial cells are

not recognized. Thus, HA-1-specific immunotherapy combined with HLA-identical allogeneic SCT may now be feasible for patients with HA-1+ carcinomas.

REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE  
FORMAT

L6 ANSWER 3 OF 33 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2002:457494 CAPLUS

TITLE: Rapid upregulation of telomerase activity in human leukemia HL-60 cells treated with clinical doses of the DNA-damaging drug etoposide

AUTHOR(S): Moriarty, T. J.; Dupuis, S.; Autexier, C.

CORPORATE SOURCE: Department of Anatomy and Cell Biology, McGill University, Montreal, QC, Can.

SOURCE: Leukemia (2002), 16(6), 1112-1120

CODEN: LEUKED; ISSN: 0887-6924

PUBLISHER: Nature Publishing Group

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The enzyme telomerase is implicated in cellular resistance to apoptosis, but the mechanism for this resistance remains to be elucidated. The ability of telomerase to synthesize new DNA at telomeres suggests that this enzyme might function in the repair of double-stranded DNA breaks. To distinguish the effects of double-stranded DNA break damage and apoptosis on human telomerase activity, we treated the HL-60 human **hematopoietic cancer** cell line with clin. doses of the chemotherapeutic drug etoposide (0.5 to 5 .mu.M), which allowed us to distinguish between events assocd. with DNA damage-induced cell cycle arrest, and events assocd. with apoptosis. Large (three- to seven-fold) upregulation of telomerase activity occurred soon after etoposide treatment (3 h) in S/G2/M-arresting populations; this upregulation was abolished at onset of apoptotic cell death. No upregulation of

telomerase

activity was obsd. in cells treated with a larger dose of etoposide (5 .mu.M) that caused cells to undergo rapid apoptosis without intervening cell cycle arrests. These observations are consistent with a possible role for telomerase upregulation during the DNA damage response.

REFERENCE COUNT: 51 THERE ARE 51 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE  
FORMAT

L6 ANSWER 4 OF 33 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2002:353590 CAPLUS

DOCUMENT NUMBER: 136:368438

TITLE: Methods for selecting T-cells specifically recognizing

minor histocompatibility antigen for use in eliminating cancerous hematopoietic cells

INVENTOR(S): Perreault, Claude

PATENT ASSIGNEE(S): Compatigene Inc., Can.

SOURCE: PCT Int. Appl., 37 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002036750	A2	20020510	WO 2001-CA1477	20011019
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2002013694	A5	20020515	AU 2002-13694	20011019
PRIORITY APPLN. INFO.:			US 2000-704911	A 20001102
			WO 2001-CA1477	W 20011019
AB This invention relates to T-cells that specifically recognize minor histocompatibility antigen(s), methods for selecting these T-cells and uses thereof for eliminating target cells, and more particularly for eliminating hematopoietic cancerous cells. The invention is based on (1) the priming of T-cells specifically reacting against a selected immunodominant ubiquitous MiHA that is expressed by target cells and by non-target cells; and also (2) the selection of a 100 % purified population of T-cells that specifically react against an immunodominant minor histocompatibility antigen which is ubiquitously expressed by the recipient's cells or selectively expressed by specific recipient's target cells only. The major advantage of the invention is that the T-cells used therein can be transferred from a donor to a compatible recipient without causing to the latter a graft-vs.-host disease (GVHD) reaction.				
L6 ANSWER 5 OF 33 CAPLUS COPYRIGHT 2002 ACS ACCESSION NUMBER: 2002:288682 CAPLUS DOCUMENT NUMBER: 137:134656 TITLE: Celecoxib exhibits the greatest potency amongst cyclooxygenase (COX) inhibitors for growth inhibition of COX-2-negative hematopoietic and epithelial cell lines AUTHOR(S): Waskewich, Chris; Blumenthal, Rosalyn D.; Li, Honglan; Stein, Rhona; Goldenberg, David M.; Burton, Jack CORPORATE SOURCE: Garden State Cancer Center, Belleville, NJ, 07109, USA SOURCE: Cancer Research (2002), 62(7), 2029-2033 CODEN: CNREA8; ISSN: 0008-5472 PUBLISHER: American Association for Cancer Research DOCUMENT TYPE: Journal LANGUAGE: English				
AB Cyclooxygenase-2 (COX-2) is an important cellular target for both therapy and/or prevention of inflammatory disorders and cancer. The advent of selective COX-2 inhibitors now allows a more precise and safer treatment approach. The screening of an array of cancer cell lines for growth inhibitory effects of COX-2-selective and -nonselective inhibitors,				

including celecoxib (Celebrex) and rofecoxib (Vioxx), produced two unanticipated findings. Firstly, the antiproliferative effects of celecoxib were noted to be of very similar magnitude for both hematopoietic and epithelial cancer cell lines. Most hematopoietic cell lines had no detectable COX-2 expression by reverse transcription-PCR, and none expressed COX-2 protein. In addn., COX-2-neg. epithelial lines were found to have IC50s for celecoxib that were very similar to their COX-2+ counterparts. Thus, important antiproliferative effects were obsd. that were independent of both the cell lineage and COX-2 status. Secondly, it was also obsd. that COX-2 inhibitor drugs, celecoxib and rofecoxib, with similar COX-2-selectivity and clin. efficacy for inflammatory indications, differed significantly in their in vitro antiproliferative effects on cancer cell lines. IC50s of 35-65 .mu.M were obsd. for celecoxib across this entire panel of cell lines. Finally, no difference in the mode or degree of cytotoxicity was apparent between cell lines, because similar levels of apoptosis were obsd. in COX-2+ and -neg. cell lines after treatment with celecoxib, with correspondingly lower levels after rofecoxib treatment. These data are important in that they provide the first direct comparison of epithelial and **hematopoietic cancer** cell lines, as well as a direct comparison of the in vitro anticancer effects of the two clin. available COX-2 inhibitors.

REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE  
FORMAT

L6 ANSWER 6 OF 33 CAPLUS COPYRIGHT 2002 ACS  
ACCESSION NUMBER: 2002:183342 CAPLUS  
DOCUMENT NUMBER: 137:107140  
TITLE: Adhesion-mediated intracellular redistribution of c-Fas-associated death domain-like IL-1-converting enzyme-like inhibitory protein-long confers resistance to CD95-induced apoptosis in **hematopoietic cancer** cell lines  
AUTHOR(S): Shain, Kenneth H.; Landowski, Terry H.; Dalton, William S.  
CORPORATE SOURCE: Departments of Interdisciplinary Oncology and Biochemistry and Molecular Biology, H. Lee Moffitt Cancer Center and Research Institute, University of South Florida, Tampa, FL, 33612, USA  
SOURCE: Journal of Immunology (2002), 168(5), 2544-2553  
CODEN: JOIMA3; ISSN: 0022-1767  
PUBLISHER: American Association of Immunologists  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
AB Evasion of immune surveillance is a key step in malignant progression. Interactions between transformed hematopoietic cells and their environment may initiate events that confer resistance to apoptosis and facilitate immune evasion. In this report, the authors demonstrate that .beta.1 integrin-mediated adhesion to fibronectin inhibits CD95-induced caspase-8 activation and apoptosis in hematol. tumor cell lines. This adhesion-dependent inhibition of CD95-mediated apoptosis correlated with

enhanced c-Fas-assocd. death domain-like IL-1-converting enzyme-like inhibitory protein-long (c-FLIPL) cytosolic soly. compared with non-adhered cells. Cytosolic c-FLIPL protein preferentially assocd. with cytosolic Fas-assocd. death domain protein (FADD) and localized to the death-inducing signal complex after CD95 ligation in adherent cells. The incorporation of c-FLIPL in the death-inducing signal complex prevented procaspase-8 processing and activation of the effector phase of apoptosis.

Adhesion to fibronectin increased c-FLIPL cytosolic soly. and availability

for FADD binding by redistributing c-FLIPL from a preexisting membrane-assocd. fraction. Increased cytosolic availability of c-FLIPL for FADD binding was not related to increased levels of RNA or protein synthesis. These data show that adhesion of anchorage-independent cells to fibronectin provides a novel mechanism of resistance to CD95-mediated programmed cell death by regulating the cellular localization and availability of c-FLIPL.

REFERENCE COUNT: 62 THERE ARE 62 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE

FORMAT

L6 ANSWER 7 OF 33 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2002:40006 CAPLUS

DOCUMENT NUMBER: 137:214448

TITLE: Intrinsic and extrinsic mechanisms of cd95/fas resistance: a paradigm for **hematopoietic cancer** progression

AUTHOR(S): Shain, Kenneth H.

CORPORATE SOURCE: Univ. of South Florida, Tampa, FL, USA

SOURCE: (2001) 134 pp. Avail.: UMI, Order No. DA3009526  
From: Diss. Abstr. Int., B 2001, 62(3), 1181

DOCUMENT TYPE: Dissertation

LANGUAGE: English

AB Unavailable

L6 ANSWER 8 OF 33 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2001:659250 CAPLUS

DOCUMENT NUMBER: 136:41866

TITLE: Benzene and lymphohematopoietic malignancies in humans

AUTHOR(S): Hayes, Richard B.; Songnian, Yin; Dosemeci, Mustafa; Linet, Martha

CORPORATE SOURCE: Division of Cancer Epidemiology and Genetics, U.S. National Cancer Institute, Bethesda, MD, 20892, USA

SOURCE: American Journal of Industrial Medicine (2001), 40(2),

117-126

CODEN: AJIMD8; ISSN: 0271-3586

PUBLISHER: Wiley-Liss, Inc.

DOCUMENT TYPE: Journal; General Review

LANGUAGE: English

AB Quant. evaluations of benzene-assocd. risk for cancer have relied primarily on findings from a cohort study of highly exposed rubber workers

in the USA. An epidemiol. investigation in China (NCI/CAPM study)

extended quant. evaluations of cancer risk to a broader range of benzene exposures, particularly at lower levels. We review the evidence implicating benzene in the etiol. of hematopoietic disorders, clarify methodol. aspects of the NCI/CAPM study, and examine the study in the context of the broader literature on health effects assocd. with occupational benzene exposure. Quant. relationships for cancer risk from China and the USA show a relatively smooth increase in risk for acute myeloid leukemia and related conditions over a broad dose range of benzene exposure (below 200 ppm-years, mostly from the China study, and above 200 ppm-years, mostly from the US study). Risks of acute myeloid leukemia and other malignant and nonmalignant hematopoietic disorders assocd. with benzene exposure in China are consistent with other information about benzene exposure, hematotoxicity, and cancer risk, extending evidence for **hematopoietic cancer** risks to levels substantially lower than had previously been established.

REFERENCE COUNT: 106 THERE ARE 106 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 9 OF 33 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2001:526094 CAPLUS

DOCUMENT NUMBER: 135:136415

TITLE: Shc associated protein 140 (SAP-140)

INVENTOR(S): Roifman, Chaim M.; Sharfe, Nigel

PATENT ASSIGNEE(S): The Hospital for Sick Children, Can.

SOURCE: PCT Int. Appl., 106 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001051509	A2	20010719	WO 2001-CA23	20010110
WO 2001051509	A3	20011129		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2000-175233P P 20000110

AB SAP140 is a novel Shc Assocg. Protein isolated by binding to the tyrosine phosphatase Lyp. SAP is expressed in hematopoietic cells and is involved in signal transduction through both antigen and cytokine receptor pathways. SAP140 is pre-activated in Acute Myeloid Leukemia. Manipulation of the activity of SAP may be of therapeutic value in AML

and

ALL and in uncontrolled T cell diseases or disease of the hematopoietic system in general.

L6 ANSWER 10 OF 33 CAPLUS COPYRIGHT 2002 ACS  
 ACCESSION NUMBER: 2001:465764 CAPLUS  
 DOCUMENT NUMBER: 135:193653  
 TITLE: The Gem GTP-binding protein promotes morphological  
 differentiation in neuroblastoma  
 AUTHOR(S): Leone, Alvaro; Mitsiades, Nicholas; Ward, Yvona;  
 Spinelli, Beth; Poulaki, Vasiliki; Tsokos, Maria;  
 Kelly, Kathleen  
 CORPORATE SOURCE: Cell and Cancer Biology Department, Medicine Branch,  
 Division of Clinical Sciences, National Cancer  
 Institute, Bethesda, MD, 20892, USA  
 SOURCE: Oncogene (2001), 20(25), 3217-3225  
 CODEN: ONCNES; ISSN: 0950-9232  
 PUBLISHER: Nature Publishing Group  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB Gem is a small GTP-binding protein within the Ras superfamily whose  
 function has not been detd. The authors report here that ectopic Gem  
 expression is sufficient to stimulate cell flattening and neurite  
 extension in N1E-115 and SH-SY5Y neuroblastoma cells, suggesting a role  
 for Gem in cytoskeletal rearrangement and/or morphol. differentiation of  
 neurons. Consistent with this potential function, in clin. samples of  
 neuroblastoma, Gem protein was most highly expressed within cells which  
 had differentiated to express ganglionic morphol. Gem was also obsd. in  
 developing trigeminal nerve ganglia in 12.5 day mouse embryos,  
 demonstrating that Gem expression is a property of normal ganglionic  
 development. Although Gem expression is rare in epithelial and  
**hematopoietic cancer** cell lines, constitutive Gem levels  
 were detected in several neuroblastoma cell lines and could be further  
 induced as much as 10-fold following treatment with PMA or the  
 acetylcholine muscarinic agonist, carbachol.

REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR  
 THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE

FORMAT

=> d his

(FILE 'HOME' ENTERED AT 08:21:39 ON 09 DEC 2002)

FILE 'REGISTRY' ENTERED AT 08:21:50 ON 09 DEC 2002

L1 STRUCTURE UPLOADED

L2 3 S L1

L3 77 S L1 FULL

FILE 'CAPLUS' ENTERED AT 08:25:03 ON 09 DEC 2002

L4 70 S L3

L5 174654 S L4 AND INHIBITING CELL PROLIFERATION OR CANCER

L6 33 S HEMATOPOIETIC CANCER

L7 0 S L4 AND L6

L8 33 S L6 AND L5

L9 73957 S LEUKEMIA

L10 0 S L4 AND L9

L11 6868 S L9 AND L5



L12 5105 S LYMPHOBLASTIC LEUKEMIA OR MYELOMONOCYTE LEUKEMIA OR CHRONIC  
M

L13 0 S L4 AND L12

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L4 ANSWER 1 OF 70 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2001:299090 CAPLUS

DOCUMENT NUMBER: 134:334331

TITLE: Liquid crystal-alignment film and its preparation

INVENTOR(S): Sakai, Takeya; Kawatsuki, Yoshihiro

PATENT ASSIGNEE(S): Hayashi Telempu Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

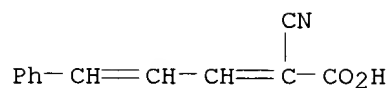
DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	JP 2001117102	A2	20010427	JP 1999-300455	19991022
AB	The alignment film is prep'd. by (1) applying a polymer capable of photoinduced orientation on a substrate, and (2) irradiating an UV contg. both the complete and incomplete polarized light onto the polymer to obtain liq. crystal-alignment ability. The polymer may be anisotropically dimerized by the UV radiation. The polymer may have a side chain selected from (substituted) .beta.-(2-furyl)acryloyl, cinnamoyl, and cinnamylideneacetoyl groups. The polymer may have a main chain of a polyacrylate, polymethacrylate, polysiloxane, etc. Large alignment film can be manuf'd. by the method in high productivity. Thus, 4-Hydroxyethoxy-4'-(6'-biphenyloxyhexyl) methacrylate cinnamate homopolymer was applied on a substrate coated with an ITO, then nonpolar UV was irradiated onto the polymer via a declinedly arranged quartz plate to form an alignment film. A TN liq. crystal cell using the alignment film was manuf'd.				
IT	<b>336130-02-0P</b> , 4-(2-Hydroxyethoxy)-4'-(6'-biphenyloxyhexyl) methacrylate homopolymer .alpha.-cyanocinnamylideneacetate ester RL: PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent) (prepn. and dimerization; in prepn. of liq. crystal-alignment film by irradiating UV of low polarization degree onto polymer capable of photoinduced dimerization or orientation)				
RN	336130-02-0 CAPLUS				
CN	2-Propenoic acid, 2-methyl-, 6-[[4'-(2-hydroxyethoxy)[1,1'-biphenyl]-4-yl]oxy]hexyl ester, homopolymer, 2-cyano-5-phenyl-2,4-pentadienoate (9CI) (CA INDEX NAME)				
CM	1				
CRN	24139-57-9				
CMF	C12 H9 N O2				

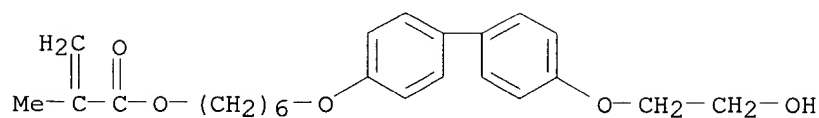


CM 2

CRN 229617-68-9  
CMF (C24 H30 O5) x  
CCI PMS

CM 3

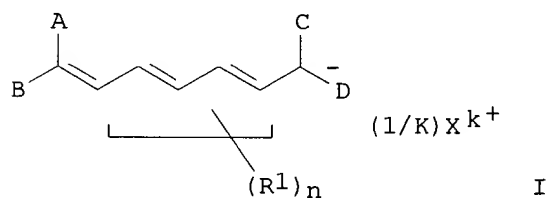
CRN 183234-70-0  
CMF C24 H30 O5



L4 ANSWER 2 OF 70 CAPLUS COPYRIGHT 2002 ACS  
ACCESSION NUMBER: 1999:802684 CAPLUS  
DOCUMENT NUMBER: 132:57190  
TITLE: Information recording media and method for  
information recording  
INVENTOR(S): Saito, Naoki; Shibata, Michihiro  
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 21 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11348420	A2	19991221	JP 1998-156206	19980604

OTHER SOURCE(S): MARPAT 132:57190  
GI



AB The title recording media have a recording layer contg. a dye I (R1 = substitution group on methine chain; A-D = substitution groups satisfying total Hammett of A and B and that of C and D ( $\sigma_p$ )  $\geq 0.6$ ; A

and

B or C and D may form a ring by bonding with unconjugated chain; n = integer of 0-5; R1 may differ when n  $\geq 2$ ; X<sup>k+</sup> = onium ion; k = integer of 0-10) formed on a transparent disk of thickness 0.6  $\pm$  0.1

mm

having pregrooves of track pitch 0.6-0.9  $\mu$ m. Recording of information into the above stated media is carried out by irradiation of laser of wavelength 600-700 nm. Write once optical disks showing durable information storage are manufactured.

IT **252912-65-5 252912-67-7**

RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(write once optical disks containing oxonol dyes and information recording by laser irradiation.)

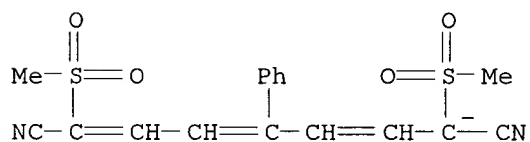
RN 252912-65-5 CAPLUS

CN 4,4'-Bipyridinium, 1,1'-bis(1-methylethyl)-, salt with 2,8-bis(methylsulfonyl)-5-phenyl-2,4,6-nonatrienedinitrile (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 252912-64-4

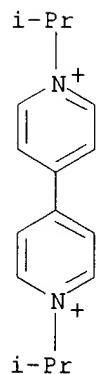
CMF C17 H15 N2 O4 S2

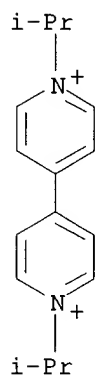


CM 2

CRN 46903-02-0

CMF C16 H22 N2

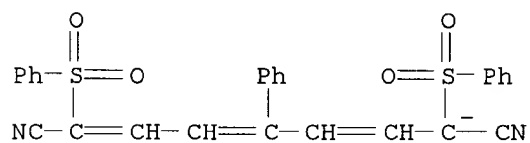




RN 252912-67-7 CAPLUS  
 CN 4,4'-Bipyridinium, 1,1'-bis(1-methylethyl)-, salt with  
 5-phenyl-2,8-bis(phenylsulfonyl)-2,4,6-nonatrienedinitrile (1:2) (9CI)  
 (CA INDEX NAME)

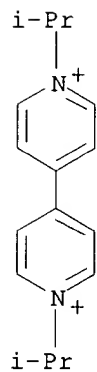
CM 1

CRN 252912-66-6  
 CMF C27 H19 N2 O4 S2



CM 2

CRN 46903-02-0  
 CMF C16 H22 N2



L4 ANSWER 3 OF 70 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1999:499578 CAPLUS

DOCUMENT NUMBER: 131:170891

TITLE: Photoreactivity of polymers with dimerizable side-groups. Kinetic analysis for probing morphology and molecular organization

AUTHOR(S): Coqueret, Xavier

CORPORATE SOURCE: Laboratoire Chimie Macromoleculaire, Univ. Sciences Technologies Lille, Villeneuve d'Ascq, F-59655, Fr.

SOURCE: Macromolecular Chemistry and Physics (1999), 200(7), 1567-1579

CODEN: MCHPES; ISSN: 1022-1352

PUBLISHER: Wiley-VCH Verlag GmbH

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The solid state photoreactivity of polymers with pendant chromophores of the cinnamic type was examd. by monitoring the reaction by UV spectroscopy. Two series of photosensitive polymers with polysiloxane or polyvinylamine main chains were selected to exemplify specific behaviors contrasting on various aspects with that of poly(vinyl cinnamate) as the ref. photocrosslinkable polymer. Valuable kinetic information was obtained from simple photoirradn. expts. for probing the phys. structure of the condensed polymeric material and for studying the influence of chromophore content. Photoisomerization of the chromophore competes efficiently with dimerization for both the liq. polysiloxanes with cinnamic esters connected by long spacers and for the glassy

cinnamoylated

polyvinylamines, the d. of sites paired for dimerization being expectedly low in these amorphous matrixes. The variations of the quantum yield for dimerization in the neat polymers as a function of their compn. are discussed and correlated to the changes of practical sensitivity for photocuring. For polysiloxanes with pendant cyanostyrylacrylic groups, the leveled reactivity obsd. with quantum yields at zero conversion independent on the macroscopic chromophore content in the samples is explained by phase sepn. leading to dispersed domains rich in photoreactive side-groups. The layered order evidenced by wide-angle x-ray scattering is consistent with the clean and reversible photoreaction. In spite of the discussed structural differences, the variation of the normalized quantum yield for dimerization

.PHI.Dim/.PHI.0

as a function of conversion .pi. is described by the same scaling law .PHI.Dim/.PHI.0 = (1-.pi.)<sup>3</sup> as was established for the amorphous and homogeneous samples of cinnamoylated polysiloxanes or polyvinylamines.

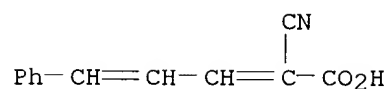
IT **24139-57-9D**, .alpha.-Cyano-.beta.-styrylacrylic acid, ester with allyl glycidyl ether-functionalized di-Me Me hydrogen siloxane

RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)

(kinetic anal. for probing morphol. and mol. organization of photoreactive polymers with dimerizable side-groups)

RN 24139-57-9 CAPLUS

CN 2,4-Pentadienoic acid, 2-cyano-5-phenyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



REFERENCE COUNT: 56 THERE ARE 56 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE  
FORMAT

L4 ANSWER 4 OF 70 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1997:617047 CAPLUS

DOCUMENT NUMBER: 127:285953

TITLE: Waterless lithographic printing plate precursor  
having

increased elasticity

INVENTOR(S): Suezawa, Mitsuru; Kokuni, Masahiro; Ikeda, Norimasa

PATENT ASSIGNEE(S): Toray Industries, Inc., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09230585	A2	19970905	JP 1996-5912	19960117
PRIORITY APPLN. INFO.:			JP 1995-15190	19950201
			JP 1995-335107	19951222

AB The plate precursor comprises at least a photodimerization-type presensitized layer and a silicone rubber layer on a substrate, wherein the photodimerization-type layer has the following stretch properties after the exposure: (1) the initial modulus of elasticity 5-75 kgf/mm<sup>2</sup>; and preferably (2) the breakage elongation .gtoreq. 10 %. The plate precursor provided excellent image reprodn. and printability because of the increased elasticity.

IT **196525-65-2**, .alpha.-Cyano-.beta.-styryl acrylic acid-Denacol EX 941 copolymer

RL: TEM (Technical or engineered material use); USES (Uses)

(photodimerizable compd. in waterless lithog. printing plate precursor)

RN 196525-65-2 CAPLUS

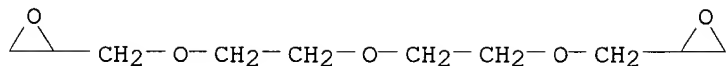
CN 2,4-Pentadienoic acid, 2-cyano-5-phenyl-, polymer with 2,2'-[oxybis[(methyl-2,1-ethanediyl)oxymethylene]]bis[oxirane] (9CI) (CA INDEX NAME)

CM 1

CRN 41638-13-5

CMF C12 H22 O5

CCI IDS

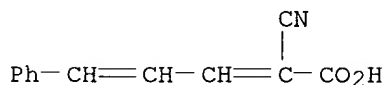


2 ( D1-Me )

CM 2

CRN 24139-57-9

CMF C12 H9 N O2

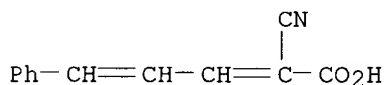


IT 24139-57-9

RL: RCT (Reactant); RACT (Reactant or reagent)  
 (photodimerizable compd. in waterless lithog. printing plate precursor  
 having increased elasticity)

RN 24139-57-9 CAPLUS

CN 2,4-Pentadienoic acid, 2-cyano-5-phenyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX  
 NAME)



L4 ANSWER 5 OF 70 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1997:511943 CAPLUS

DOCUMENT NUMBER: 127:128653

TITLE: Polymers for reversible photoinduced sol-gel  
 transitions

INVENTOR(S): Russell, Alan J.; Beckman, Eric J.; Andreopoulos,  
 Fotios M.; Wagner, William R.

PATENT ASSIGNEE(S): University of Pittsburgh, USA

SOURCE: PCT Int. Appl., 51 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9722037	A1	19970619	WO 1996-US19709	19961211
W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS,				

LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD,  
 SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN, AM, AZ, BY, KG,  
 KZ, MD, RU, TJ, TM  
 RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR,  
 IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML,  
 MR, NE, SN, TD, TG

US 5990193 A 19991123 US 1995-571250 19951212  
 AU 9711306 A1 19970703 AU 1997-11306 19961211  
 US 6174645 B1 20010116 US 1999-304417 19990503

PRIORITY APPLN. INFO.:

US 1995-571250 A 19951212  
 WO 1996-US19709 W 19961211

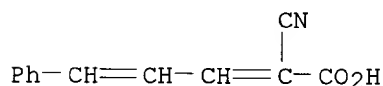
AB The present invention provides crosslinked polymeric networks that are reversibly crosslinked upon exposure to light of a suitable wavelength. In one embodiment photocrosslinkage-branched hydrophilic polymers contg. photochromic groups are synthesized. Ciannamylidene groups and derivs.

of cinnamylidene are preferably used as the photochromic agents or photocrosslinking agents.

IT **24139-57-9DP**, polyethylene oxide-modified with  
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (synthesis and use for reversible photogelation)

RN 24139-57-9 CAPLUS

CN 2,4-Pentadienoic acid, 2-cyano-5-phenyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



L4 ANSWER 6 OF 70 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1996:672668 CAPLUS

DOCUMENT NUMBER: 126:8870

TITLE: Use of Liquid Matrixes for Matrix-Assisted Laser Desorption Ionization of Polyglycols and Poly(dimethylsiloxanes)

AUTHOR(S): Williams, John B.; Gusev, Arkady I.; Hercules, David M.

CORPORATE SOURCE: Department of Chemistry, University of Pittsburgh, Pittsburgh, PA, 15260, USA

SOURCE: Macromolecules (1996), 29(25), 8144-8150

CODEN: MAMOBX; ISSN: 0024-9297

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Liq. matrixes were developed and studied for application in the MALDI anal. of polyglycols and poly(dimethylsiloxane). Characteristic pos. ion MALDI-TOF mass spectra were obtained from over 20 liq. matrixes. These systems are characterized by rapid and simple prepn. and exhibited good vacuum stability. The spot-to-spot and point-to-point reproducibility of signal intensity and mol. wt. values are indicative of the homogeneous environment created by liq. matrixes. The best performance was achieved when the chromophore, 2-cyano-5-phenyl-2,4-pentadienoic acid, was used in

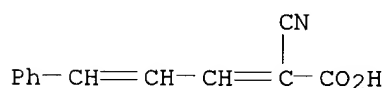


the analyte or analyte/moderator systems (moderator = nonabsorbing liq.) at or near satn. concns. Internal stds., including silver and low mol. wt. polyglycols, have been successfully employed for mass calibration. Comparison of MALDI mol. wt. data with those obtained from SIMS and GPC shows some systematic disparities. Possible reasons for these differences are discussed. Excellent agreement is seen between mol. wt. values obtained with liq. and solid MALDI matrixes. However, conventional solid MALDI matrixes generally exhibit better resoln. and can be applied for anal. of higher mol. wt. materials. This may be related to the higher laser intensity required to produce ions from liq. matrixes.

IT **24139-57-9**, 2-Cyano-5-phenyl-2,4-pentadienoic acid  
 RL: ARU (Analytical role, unclassified); ANST (Analytical study)  
 (absorber; liq. matrixes for MALDI spectrometry of polyglycols and poly(dimethylsiloxane))

RN 24139-57-9 CAPLUS

CN 2,4-Pentadienoic acid, 2-cyano-5-phenyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



L4 ANSWER 7 OF 70 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1996:281408 CAPLUS

DOCUMENT NUMBER: 125:32902

TITLE: Lithium bromide as a new catalyst for carbon-carbon bond formation in the solid state

AUTHOR(S): Prajapati, Dipak; Lekhok, Kushal C.; Sandhu, Jagir S.; Ghosh, Anil C.

CORPORATE SOURCE: Regional Res. Lab., Assam, 785 006, India

SOURCE: Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1996), (9), 959-960

CODEN: JCPRB4; ISSN: 0300-922X

PUBLISHER: Royal Society of Chemistry

DOCUMENT TYPE: Journal

LANGUAGE: English

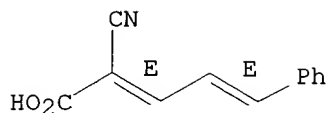
AB Lithium bromide catalyzes the condensation of carbonyl compds. RCHO [R = Ph, (E)-PhCH:CH, Me, 2-furyl, 4-quinolyl, 4-O2NC6H4] with active methylene compds. R'CH2CN (R' = cyano, CO2Et, CO2H) in the absence of solvent, to afford olefinic products (E)-RCH:C(CN)R' in high yields.

IT **81620-80-6P**  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (lithium bromide-catalyzed condensation of aldehydes with methylene compds.)

RN 81620-80-6 CAPLUS

CN 2,4-Pentadienoic acid, 2-cyano-5-phenyl-, (E,E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



L4 ANSWER 8 OF 70 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1995:280372 CAPLUS

DOCUMENT NUMBER: 122:315194

TITLE: New synthesis and functionalization of photosensitive poly(silyl ether) by addition reaction of bisepoxide with dichlorosilane

AUTHOR(S): Kameyama, Atsushi; Hayashi, Nobuyuki; Nishikubo, Tadatomi

CORPORATE SOURCE: Fac. Eng., Kanagawa Univ., Yokohama, 221, Japan

SOURCE: ACS Symposium Series (1994), 579(Polymeric Materials for Microelectronic Applications), 443-54

CODEN: ACSMC8; ISSN: 0097-6156

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A poly(silyl ether) contg. Si-Si bonds was successfully synthesized as a new class of Si-contg. polymers by the polyaddn. of 1,2-dichlorotetramethyldisilane (I) with bisphenol A diglycidyl ether (II) in the presence of a quaternary onium salt catalyst, e.g.,

tetrabutylammonium chloride. The polymer contained pendant chloromethyl groups and was readily modified with photocrosslinkable compds., e.g., 4-dimethylamino-.alpha.-cyanocinnamic acid, by a substitution reaction using 1,8-diazabicyclo[5.4.0]undecene-7 under mild conditions to give multifunctional photopolymers having both a pos.-working moiety in the main chain and a neg.-working moiety in the side chain. The photochem. properties of both the I-II copolymer and photocrosslinkable compd.-modified polymers were studied. The I-II copolymer was decompd. smoothly in a soln. by irradiation with UV light. The photochem. reaction of the photocrosslinkable-compd.-modified I-II copolymers was controlled easily by selecting the wavelength of the irradiation.

IT 163579-69-9P

SPN RL: PEP (Physical, engineering or chemical process); PRP (Properties);

(Synthetic preparation); PREP (Preparation); PROC (Process)  
(synthesis and functionalization of photosensitive poly(silyl ether))

by addn. reaction of bisepoxide with dichlorosilane)

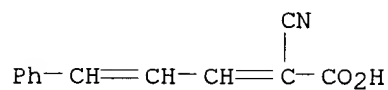
RN 163579-69-9 CAPLUS

CN Disilane, 1,2-dichloro-1,1,2,2-tetramethyl-, polymer with 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis[oxirane], 2-cyano-5-phenyl-2,4-pentadienoate (9CI) (CA INDEX NAME)

CM 1

CRN 24139-57-9

CMF C12 H9 N O2



CM 2

CRN 151458-79-6

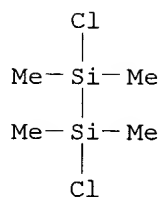
CMF (C21 H24 O4 . C4 H12 Cl2 Si2)x

CCI PMS

CM 3

CRN 4342-61-4

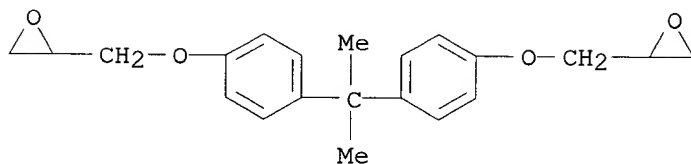
CMF C4 H12 Cl2 Si2



CM 4

CRN 1675-54-3

CMF C21 H24 O4



L4 ANSWER 9 OF 70 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1994:667339 CAPLUS

DOCUMENT NUMBER: 121:267339

TITLE: Nonlinear optical device with orientation stability and its manufacture

INVENTOR(S): Takeya, Yutaka; Sakakibara, Taro

PATENT ASSIGNEE(S): Teijin Ltd, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06208146	A2	19940726	JP 1993-4080	19930113

OTHER SOURCE(S): MARPAT 121:267339

AB The device consists of a Si-contg. sol-gel glass support contg. a nonlinear optical carboxylic acid amine salt  $R_1Ar_1(CH:CH)_nCH:C(CN)CO_2H.Z$  [I; n = 0-2; Ar<sub>1</sub> = C<sub>5</sub>-14 arom. group; R<sub>1</sub> = R<sub>2</sub>R<sub>3</sub>N, its hydrohalide salt, R<sub>4</sub>O, R<sub>5</sub>S, CN, CO<sub>2</sub>R<sub>6</sub>, OCOR<sub>7</sub>, CONR<sub>8</sub>R<sub>9</sub>, NR<sub>10</sub>COR<sub>11</sub>, R<sub>12</sub>; R<sub>2</sub>-12 = C<sub>1</sub>-8 hydrocarbyl, H; Z = 1-phenylethylamine, 1- $\alpha$ -naphthylethylamine, 1-phenyl-2-methylethylamine, 1-phenyl-2-aminopropane, 2-amino-1-butanol, 1-amino-2-propanol, 2-amino-1-propanol, 2-amino-1-(p-nitrophenyl)-1,3-propanediol, 2-dimethylamino-1-phenyl-1-benzyl-1-propanol, and/or 1-(N,N-dimethylamino)-1-phenylpropylamine], whose dipole moment is oriented in the thickness direction. The glass may be obtained from Si(OR)<sub>4</sub> (R = C<sub>1</sub>-4 hydrocarbyl). The device is manufd. by mixing a Si alkoxide alc. contg. a polar solvent with b.p. 100-200.degree. and I with H<sub>2</sub>O and corona polling at voltage 0.5-40 kV and 100-200.degree. to orient I and polymg. the alkoxide simultaneously. The device showed stable 2nd harmonic generation.

IT **158698-71-6**  
 RL: DEV (Device component use); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (nonlinear optical device consisting of silicon-contg. sol-gel glass support contg. carboxylic acid amine salt with good orientation stability)

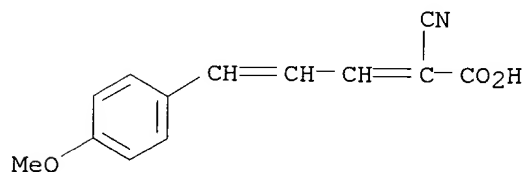
RN 158698-71-6 CAPLUS

CN 2,4-Pentadienoic acid, 2-cyano-5-(4-methoxyphenyl)-, compd. with  $\alpha$ -methylbenzenemethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 126057-96-3

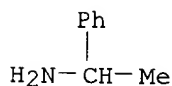
CMF C13 H11 N O3



CM 2

CRN 618-36-0

CMF C8 H11 N

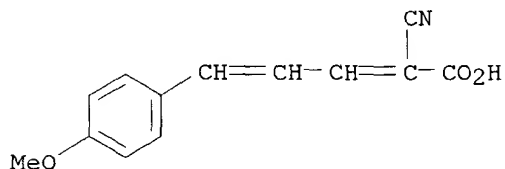


L4 ANSWER 10 OF 70 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1994:617220 CAPLUS  
 DOCUMENT NUMBER: 121:217220  
 TITLE: Nonlinear optical devices with orientation stability  
 INVENTOR(S): Takeya, Yutaka; Sakakibara, Taro  
 PATENT ASSIGNEE(S): Teijin Ltd, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06186599	A2	19940708	JP 1992-336092	19921216

OTHER SOURCE(S): MARPAT 121:217220  
 AB The devices contain nonlinear optical compds. R1Ar1(CH:CH)nCH:C(CN)CO2H  
 (n  
 = 0, 1, 2; Ar1 = C5-14 arom. group; R1 = R2R3N (hydrogen halides), R4O,  
 R5S, CN, CO2R6, OCOR7, CONR8R9, NR10COR11, R12; R2-12 = C1-8 hydrocarbon,  
 H) supported with Si-based sol-gel glass, in which dipole moment is  
 oriented to the thickness direction. The devices are manufd. by mixing  
 Si  
 alkoxide-contg. alc. solns. with polar solvents with b.p. 100-200.degree.  
 and the compds., then with H2O and basic catalysts, and applying vol.  
 with  
 0.5-40 kV at 100-200.degree. to orient by corona poling and polymerize  
 the  
 Si alkoxides.  
 IT **126057-96-3**  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (CN- and CO2H-contg. diene compds. supported with Si-based glass for  
 nonlinear optical devices with heat stability)  
 RN 126057-96-3 CAPLUS  
 CN 2,4-Pentadienoic acid, 2-cyano-5-(4-methoxyphenyl)- (9CI) (CA INDEX  
 NAME)



L4 ANSWER 11 OF 70 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1994:246195 CAPLUS  
 DOCUMENT NUMBER: 120:246195  
 TITLE: Nonlinear optical properties of poled polymer of  
 phenoxy resin containing .alpha.-cyano unsaturated  
 carboxylate  
 AUTHOR(S): Sugihara, Okihiro; Nakayama, Hideki; Okamoto,

CORPORATE SOURCE: Naomichi; Sakakibara, Taro; Taketani, Yutaka  
 SOURCE: Fac. Eng., Shizuoka Univ., Hamamatsu, 432, Japan  
 Japanese Journal of Applied Physics, Part 2: Letters  
 (1994), 33(3A), L321-L323  
 CODEN: JAPL D8; ISSN: 0021-4922

DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB A new nonlinear optical polymer of phenoxy resin contg.  
 2-cyano-5-(4-methoxyphenyl)-2,4-pentadienoate as a pendant group is  
 synthesized. A high concn. (84%) of chromophores with a relatively high  
 value of hyperpolarizability (50 .times. 10<sup>-30</sup> esu) is obtained. The  
 corona-poled polymer film shows hypochromic shift (.phi. = 0.084) and  
 birefringence (.DELTA..eta.(.omega.) = 0.9% and .DELTA..eta.(2.omega.) =  
 1.6%). A second-order nonlinear coeff. of d<sub>33</sub> = 22 pm/V is achieved.

The value decreases to 70% after 10 h but remains stable thereafter.

IT **154452-29-6**  
 RL: PRP (Properties)  
 (nonlinear optical properties of poled)

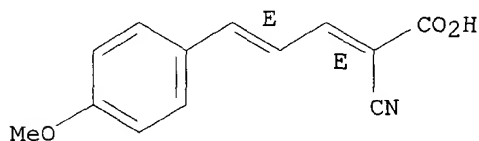
RN 154452-29-6 CAPLUS

CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with  
 (chloromethyl)oxirane,  
 (E,E)-2-cyano-5-(4-methoxyphenyl)-2,4-pentadienoate (9CI) (CA INDEX  
 NAME)

CM 1

CRN 163440-59-3  
 CMF C13 H11 N O3

Double bond geometry as shown.

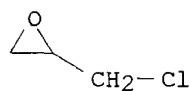


CM 2

CRN 25068-38-6  
 CMF (C15 H16 O2 . C3 H5 Cl O)x  
 CCI PMS

CM 3

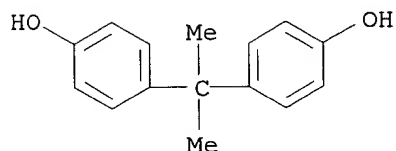
CRN 106-89-8  
 CMF C3 H5 Cl O



CM 4

CRN 80-05-7

CMF C15 H16 O2



L4 ANSWER 12 OF 70 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1994:217660 CAPLUS

DOCUMENT NUMBER: 120:217660

TITLE: Preparation of pyrrolothiazoles as pharmaceuticals

INVENTOR(S): Nagaoka, Hitoshi; Shishikura, Junichi; Tomioka, Kenichi; Mase, Toshasu

PATENT ASSIGNEE(S): Yamanouchi Pharma Co Ltd, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 28 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

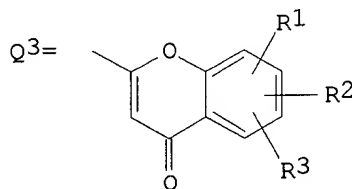
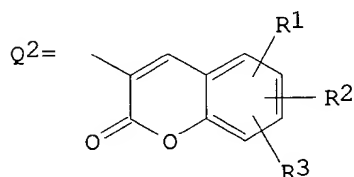
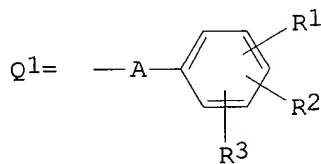
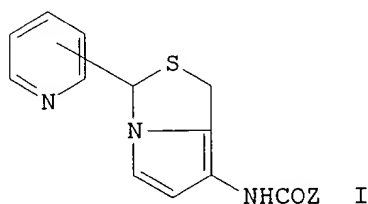
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05230069	A2	19930907	JP 1992-70152	19920220

OTHER SOURCE(S): MARPAT 120:217660  
GI

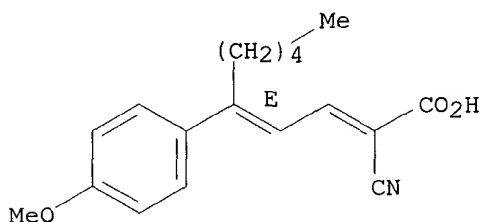


AB Pyrrolothiazoles I [Z = Q1-3; R1-3 = H, halo, lower (halo)alkyl, alkoxy, alkylthio, alkylsulfinyl, or alkylsulfonyl, OH, cyano, NO<sub>2</sub>; A =

(substituted) alkylene, alkenylene, or alkynylene; if A = unsubstituted alkylene, then R1 = R2 = R3 .noteq. H], their salts, stereoisomers, and solvates are prepd. as platelet-activating factor antagonists and thromboxane A2 inhibitors (no data). 2-Cyano-5-(4-methoxyphenyl)-2,4-decadienoic acid (372 mg) was chlorinated with (COCl)<sub>2</sub> in DMF-CH<sub>2</sub>Cl<sub>2</sub> at room temp. for 1 h to give acid chloride. Sep., 400 mg I (Z = OCMe<sub>3</sub>, 3-pyridyl) was treated with CF<sub>3</sub>CO<sub>2</sub>H at room temp. for 1 h and treated with the acid chloride and NEt<sub>3</sub> at room temp. for 12 h to give 191 mg I [Z = Q1, R1 = 4-OMe, R2 - R3 = H, A = C(CN):CHCH:C(CH<sub>2</sub>)<sub>4</sub>Me, 3-pyridyl].

IT **153529-89-6P**  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of, as intermediate for pyrrolothiazole pharmaceuticals)  
 RN 153529-89-6 CAPLUS  
 CN 2,4-Decadienoic acid, 2-cyano-5-(4-methoxyphenyl)-, (? ,E)- (9CI) (CA INDEX NAME)

Double bond geometry as described by E or Z.



L4 ANSWER 13 OF 70 CAPLUS COPYRIGHT 2002 ACS  
 ACCESSION NUMBER: 1994:54333 CAPLUS  
 DOCUMENT NUMBER: 120:54333  
 TITLE: Preparation of sulfonamidoaryl hydroxamic acids as inflammation and tumor inhibitors  
 INVENTOR(S): Ohtani, Mitsuaki; Arita, Hitoshi; Sugita, Kenji; Matsuura, Takaharu; Shirahase, Kazuhiro  
 PATENT ASSIGNEE(S): Shionogi and Co., Ltd., Japan  
 SOURCE: PCT Int. Appl., 125 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9312075	A1	19930624	WO 1992-JP1593	19921207
W: JP, KR, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 570594	A1	19931124	EP 1992-924883	19921207
EP 570594	B1	19970730		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, MC, NL, PT, SE				
AT 156116	E	19970815	AT 1992-924883	19921207
ES 2107557	T3	19971201	ES 1992-924883	19921207
US 5534654	A	19960709	US 1993-98272	19930803



PRIORITY APPLN. INFO.:

JP 1991-350793

19911210

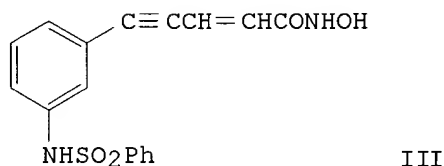
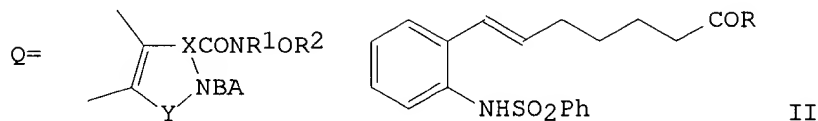
WO 1992-JP1593

19921207

OTHER SOURCE(S):

MARPAT 120:54333

GI



AB The title compds. R2ONR1COXA1YNR3BA2 (I) [A1 = (substituted) arom. ring, arom. heterocyclic ring; A2 = H, (substituted) aryl, arom. heterocyclic ring; B = single bond, B1B2; B1 = CO, SO2; B2 = alkylene, alkenylene, etc.; X = (substituted) alkylene which may have O, S, N and may have unsatd. bond; Y = single bond, heteroatom, (substituted) alkylene which may contain heteroatom and may have unsatd. bond; X and N (which is linked

to Y) may together form a moiety Q; R1 - R3 = H, (substituted) alkyl, aryl] were prepd. I inhibit hemangioendothelial cell growth, the development of a lymphocyte adhesion factor, and ras gene-induced cell transformation and are useful as inflammation and tumor inhibitors. Condensation of carboxylic acid (E)-II (R = OH) with NH2OH.HCl in DMF contg. N-hydroxysuccinimide, N,N-dicyclohexylcarbodiimide, and Et3N gave (E)-II (R = NHOH). Hydroxamic acid (E)-III in vitro exhibited MIC of 0.039 .mu.M against ras gene-induced cell transformation.

IT 151720-71-7P

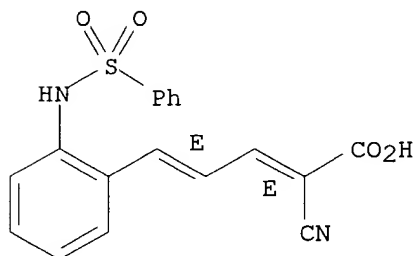
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. and reaction of, in prepn. of inflammation and tumor inhibitor)

RN 151720-71-7 CAPLUS

CN 2,4-Pentadienoic acid, 2-cyano-5-[2-[(phenylsulfonyl)amino]phenyl]-, (E,E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



L4 ANSWER 14 OF 70 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1993:427484 CAPLUS

DOCUMENT NUMBER: 119:27484

TITLE: Cadmium iodide as a new catalyst for Knoevenagel condensations

AUTHOR(S): Prajapati, Dipak; Sandhu, Jagir S.

CORPORATE SOURCE: Div. Drugs Pharm. Chem., Reg. Res. Lab., Jorhat, 785 006, India

SOURCE: Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1972-1999) (1993), (6), 739-40

CODEN: JCPRB4; ISSN: 0300-922X

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 119:27484

AB Cadmium iodide catalyzes the condensation of aldehydes with active methylene compds., in the absence of solvent, to afford olefinic products in high yields. Thus, benzaldehyde, malononitrile, and KCN was mixed at room temp. for 3 min then heated 5 min at 75.degree. to give 95 % PhCH:C(CN)2.

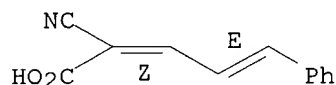
IT **148238-26-0P**

RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. of)

RN 148238-26-0 CAPLUS

CN 2,4-Pentadienoic acid, 2-cyano-5-phenyl-, (Z,E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



L4 ANSWER 15 OF 70 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1993:124153 CAPLUS

DOCUMENT NUMBER: 118:124153

TITLE: Bismuth(III)chloride as a new catalyst for Knoevenagel

condensation in the absence of solvent

AUTHOR(S): Prajapati, Dipak; Sandhu, Jagir S.

CORPORATE SOURCE: Div. Drugs Pharm. Chem., Reg. Res. Lab., Jorhat, 785 006, India

SOURCE: Chemistry Letters (1992), (10), 1945-6

CODEN: CMLTAG; ISSN: 0366-7022

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 118:124153

AB The Knoevenagel condensation of various aldehydes was carried out under heterogeneous catalysts conditions using bismuth(III)chloride in absence of solvent. The method gives high yields of Knoevenagel products.

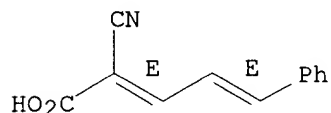
IT **81620-80-6P**

RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. of, by bismuth trichloride-catalyzed Knoevenagel reaction of .alpha.,.beta.-unsatd. aldehyde with active methylene compd.)

RN 81620-80-6 CAPLUS

CN 2,4-Pentadienoic acid, 2-cyano-5-phenyl-, (E,E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



L4 ANSWER 16 OF 70 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1993:104955 CAPLUS

DOCUMENT NUMBER: 118:104955

TITLE: Radiation-curable isobutylene copolymers for coating and adhesive applications

INVENTOR(S): Audett, Jay Douglas; Dias, Anthony Jay; Powers, Kenneth William; Wang, Hsien Chang

PATENT ASSIGNEE(S): Exxon Chemical Patents, Inc., USA

SOURCE: PCT Int. Appl., 31 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 16

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9211295	A1	19920709	WO 1991-US9653	19911219
W: JP				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, MC, NL, SE				
AT 140465	E	19960815	AT 1990-905077	19891120
ES 2090128	T3	19961016	ES 1990-905077	19891120
EP 563271	A1	19931006	EP 1992-903232	19911219
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
JP 06504078	T2	19940512	JP 1991-503751	19911219
PRIORITY APPLN. INFO.:			US 1990-633645	A 19901220
			EP 1990-905077	A 19891120
			WO 1991-US9653	W 19911219

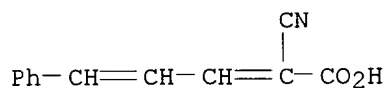
AB The title polymers are prepd. from C4-7 isoolefins and p-alkylstyrenes (A)

with radiation-reactive functional groups, optionally nonreactive groups, at the p-alkyl groups of A. Thus, a 97.5:2.5 mol% isobutylene-p-methylstyrene copolymer (I) was brominated at 40.degree. under light to form a I contg. 0.9 mol% benzylic bromide group, which can be further reacted with Et3N, Et3P, Na diethyldithiocarbamate, carboxylic acid (esters), fatty acid (esters), and photoinitiator derivs. A PhMe soln. of

I-4-hydroxybenzophenone reaction product was formed as a 1-mil film on a steel plate or blended (1:1) with ECR143H tackifier and exposed under 0.24-J/cm2 UV radiation to give a film with good edge anticorrosion (10 days in 5% aq. NaCl soln.) or a pressure sensitive adhesive, resp.

IT **24139-57-9DP**, .alpha.-Cyanocinnamylidene-acetic acid, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer

RL: PREP (Preparation)  
 (rubber, manuf. of, radiation-curable, for coatings or adhesives)  
 RN 24139-57-9 CAPLUS  
 CN 2,4-Pentadienoic acid, 2-cyano-5-phenyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



L4 ANSWER 17 OF 70 CAPLUS COPYRIGHT 2002 ACS  
 ACCESSION NUMBER: 1993:104952 CAPLUS  
 DOCUMENT NUMBER: 118:104952  
 TITLE: Radiation-curable isobutylene copolymers for lithographic and corrosion-resistant coating applications  
 INVENTOR(S): Audett, Jay Douglas; McElrath, Kenneth Odell  
 PATENT ASSIGNEE(S): Exxon Chemical Patents, Inc., USA  
 SOURCE: PCT Int. Appl., 118 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 16  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9211322	A2	19920709	WO 1991-US9649	19911219
WO 9211322	A3	19920806		
W: JP				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, MC, NL, SE				
AT 140465	E	19960815	AT 1990-905077	19891120
ES 2090128	T3	19961016	ES 1990-905077	19891120
EP 563251	A1	19931006	EP 1992-903000	19911219
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
JP 06504628	T2	19940526	JP 1991-503210	19911219
US 5376503	A	19941227	US 1992-982104	19921124
US 5585225	A	19961217	US 1994-298450	19941027
US 5585416	A	19961217	US 1995-478303	19950607
US 5587261	A	19961224	US 1995-473854	19950607
US 5591551	A	19970107	US 1995-474870	19950607
PRIORITY APPLN. INFO.:			US 1990-631610	A 19901220
			EP 1990-905077	A 19891120
			WO 1991-US9649	W 19911219
			US 1992-982104	A3 19921124
			US 1994-298450	A3 19941027

AB The title polymers are prepd. from C4-7 isoolefins and p-alkylstyrenes  
 (A)

with radiation-reactive functional groups, optionally nonreactive groups, at the p-alkyl groups of A. Thus, a 97.5:2.5 mol% isobutylene-p-methylstyrene copolymer (I) was brominated at 40.degree. under light to form a I contg. 0.9 mol% benzylic bromide group, which can be further reacted with Et3N, Et3P, Na di-Et dithiocarbamate, carboxylic acid

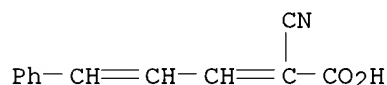
(esters), fatty acid (esters), and photoinitiator derivs. A PhMe soln. of I-4-hydroxybenzophenone reaction product was formed as a 1-mil film on a steel plate and exposed under 0.24-J/cm<sup>2</sup> UV radiation to give a film with good edge anticorrosion (10 days in 5% aq. NaCl soln.) or coated on a cardboard substrate and irradiated with UV light in a pattern to form sharp lithog. images.

IT **24139-57-9DP**, .alpha.-Cyanocinnamylidene-acetic acid, reaction products with brominated or chlorinated isobutylene-methylstyrene copolymer

RL: PREP (Preparation)  
(rubber, manuf. of, radiation-curable, for anticorrosive coatings or resists)

RN 24139-57-9 CAPLUS

CN 2,4-Pentadienoic acid, 2-cyano-5-phenyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



L4 ANSWER 18 OF 70 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1993:90352 CAPLUS

DOCUMENT NUMBER: 118:90352

TITLE: Aromatic conjugated nonlinear optical material

INVENTOR(S): Takeya, Yutaka

PATENT ASSIGNEE(S): Teijin Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.  
CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04198924	A2	19920720	JP 1990-325413	19901129

OTHER SOURCE(S): MARPAT 118:90352

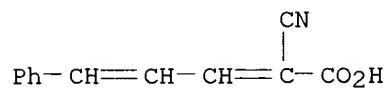
AB The material comprises a solid soln. of carboxylic acid  
XArY(CH:CH)nCH:C(CN)CO<sub>2</sub>H (n = 0, 1, 2; Ar = C<sub>5</sub>-14 arom. group; X, Y = R<sub>10</sub>, R<sub>2</sub>R<sub>3</sub>N, R<sub>4</sub>S, CN, NO<sub>2</sub>, CO<sub>2</sub>R<sub>5</sub>, OCOR<sub>6</sub>, CONR<sub>7</sub>R<sub>8</sub>, NR<sub>9</sub>COR<sub>10</sub>, R<sub>11</sub>; R<sub>1</sub>-11 = C<sub>1</sub>-8 hydrocarbon residue, H) and an indole carboxylic acid  
R<sub>50</sub>(Ind)(CH:CH)mCH:C(CN)CO<sub>2</sub>H (Ind = indole residue; R<sub>50</sub> = R<sub>51</sub>R<sub>52</sub>N, R<sub>53</sub>O, R<sub>54</sub>S, CN, NO<sub>2</sub>, CO<sub>2</sub>R<sub>55</sub>, OCOR<sub>56</sub>, CONR<sub>57</sub>R<sub>58</sub>, NR<sub>59</sub>COR<sub>60</sub>, R<sub>61</sub>; R<sub>51</sub>-61 = C<sub>1</sub>-8 hydrocarbon residue; m = 0-2).

IT **24139-57-9D**, solid solns. with indolyl carboxylic acids

RL: TEM (Technical or engineered material use); USES (Uses)  
(nonlinear optical material, high second harmonic generation)

RN 24139-57-9 CAPLUS

CN 2,4-Pentadienoic acid, 2-cyano-5-phenyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



L4 ANSWER 19 OF 70 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1993:29821 CAPLUS

DOCUMENT NUMBER: 118:29821

TITLE: Photographic material containing quick bleachable dyes

INVENTOR(S): Kawashima, Yasuhiko; Yamauchi, Reiko; Kagawa, Nobuaki

PATENT ASSIGNEE(S): Konica Co., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 37 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

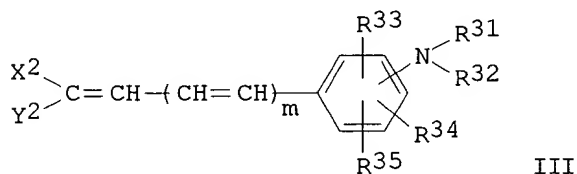
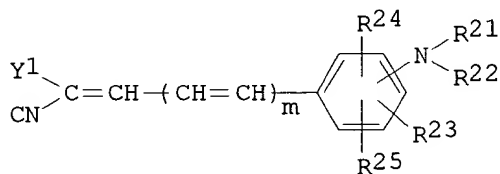
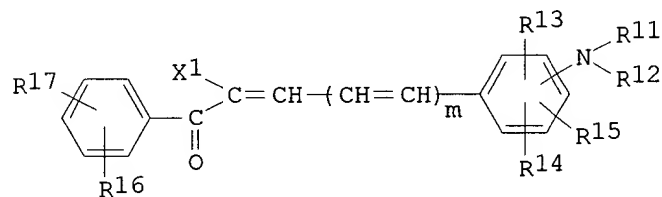
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04116639	A2	19920417	JP 1990-237765	19900907

GI



AB The title photog. material contains a dispersed fine solid powder of a compd. selected from I, II and III [R1,2 = H, (cyclo)alkyl, alkenyl, aryl,

heterocyclyl, acyl, sulfonyl; R1 and R2 may form a 5- or 6-membered ring; R3-5 = H, halo, alkyl, CO2H, alkoxycarbonyl, aryloxy carbonyl, amino, carbamoyl, sulfamoyl, NO2, CN, OH, alkoxy, SH, aryl, alkenyl; X1 = COR8, CONR8R9, CO2R8, SO2R8, SOR8, SO2NR8R9; R8,9 = H, (cyclo)alkyl, aryl, heterocyclyl, alkenyl; m = 0-2; Y1 = CN, CONR8R9, CO2R8, SO2R8, SOR8, SO2NR8R9; X2, Y2 = COR8R9, CO2R8, SO2R8, SOR8, SO2NR8R9].

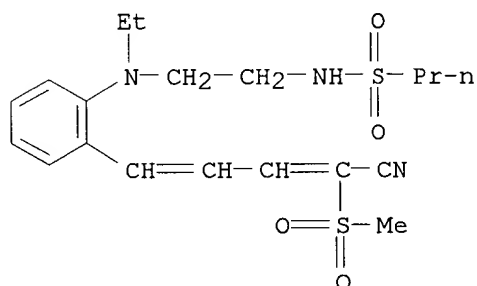
IT **144807-20-5**

RL: USES (Uses)

(bleachable dye, photog. material contg.)

RN 144807-20-5 CAPLUS

CN 1-Propanesulfonamide, N-[2-[[2-[4-cyano-4-(methylsulfonyl)-1,3-butadienyl]phenyl]ethylamino]ethyl]- (9CI) (CA INDEX NAME)



L4 ANSWER 20 OF 70 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1992:661831 CAPLUS

DOCUMENT NUMBER: 117:261831

TITLE: Laser recording material using secondary harmonic generation and recording method

INVENTOR(S): Takeya, Yutaka

PATENT ASSIGNEE(S): Teijin Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04214387	A2	19920805	JP 1990-409867	19901212

OTHER SOURCE(S): MARPAT 117:261831

AB Claimed are (1) recording medium having supported recording layer of .ltoreq.10 .mu.m thickness comprising a mixt. contg. colloidal super fine particle dispersion surface-treated by p-nitroaniline and a colloidal super fine particle dispersion surface-treated by X(Y)Ar(CH:CH)nCH:C(CN)CO2H (Ar = C5-14 arom. group; X, Y = R10, R2R3N, R4S, nitrile, NO2, CO2R5, OCOR6, CONR7R8, NR9COR10, R11; R1-11 = H, C1-8 hydrocarbonyl), (2) recording method comprising irradiating from a heat source on the recording layer and forming solid soln. without symmetry center on the irradiated area, and (3) reading record by detection of secondary harmonic generation from the solid soln. area described in 2 under beam irradiation. Thus, an Au colloidal dispersion treated with

p-nitroaniline and an Au colloidal dispersion treated with 3-(3,4-dimethoxyphenyl)-2-cyanopropenoic acid were mixed and applied onto a glass support to give the title recording material, which was irradiated with an IR laser to form record.

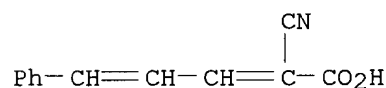
IT **24139-57-9**

RL: USES (Uses)

(gold colloidal dispersion surface-treated by, for laser recording material)

RN 24139-57-9 CAPLUS

CN 2,4-Pentadienoic acid, 2-cyano-5-phenyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



L4 ANSWER 21 OF 70 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1992:622718 CAPLUS

DOCUMENT NUMBER: 117:222718

TITLE: Nonlinear optical material

INVENTOR(S): Takeya, Yutaka

PATENT ASSIGNEE(S): Teijin K. K., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04096026	A2	19920327	JP 1990-211637	19900813

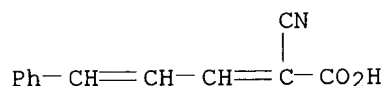
AB The title material consists of a solid soln. from (R)aQ(CH:CH)bCH:C(CN)COOH (Q = residue of indole or C5-14 arom. compd.; R = amino, alkoxy, alkylthio, CN, NO<sub>2</sub>, COOR<sub>1</sub> or OCOR<sub>2</sub> ester, CONR<sub>1</sub>R<sub>2</sub> or N(R<sub>1</sub>)COR<sub>2</sub> amide, hydrocarbon radical, or H, different or same; a = 1 and 2 with indole and arom. residue for Q, resp.; b = 0, 1, or 2) and R<sub>3</sub>ArR<sub>4</sub> (Ar = C<sub>6</sub>-14 arom. radical, R<sub>3</sub> = CN, NO<sub>2</sub>, RCO, RSO<sub>2</sub> (R = C<sub>1</sub>-4 alkyl or halogen-substituted alkyl); R<sub>4</sub> = N(R<sub>5</sub>)<sub>2</sub> (R<sub>5</sub> = H or C<sub>1</sub>-4 hydrocarbon radical), C<sub>1</sub>-4alkoxy, or C<sub>1</sub>-4 Alkylthio radical; R<sub>3</sub> and R<sub>4</sub> are at para- or peri-positions).

IT **24139-57-9D**, 2-Cyano-5-phenyl-2, 4-pentadienoic acid, solid solns. with trifluoromethylaniline **126057-96-3D**, solid solns. with aniline derivs.  
 RL: PEP (Physical, engineering or chemical process); PROC (Process) (nonlinear optical materials from)

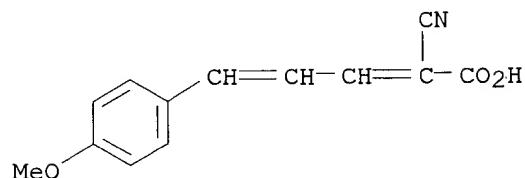
RN 24139-57-9 CAPLUS

CN 2,4-Pentadienoic acid, 2-cyano-5-phenyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

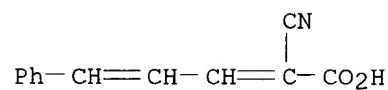




RN 126057-96-3 CAPLUS  
 CN 2,4-Pentadienoic acid, 2-cyano-5-(4-methoxyphenyl)- (9CI) (CA INDEX  
 NAME)



L4 ANSWER 22 OF 70 CAPLUS COPYRIGHT 2002 ACS  
 ACCESSION NUMBER: 1992:622489 CAPLUS  
 DOCUMENT NUMBER: 117:222489  
 TITLE: Preparation of novel nonlinear organic materials  
 AUTHOR(S): Taketani, Y.; Shouji, A.; Iwata, K.  
 CORPORATE SOURCE: Tokyo Res. Cent., TEIJIN Ltd., Hino, 191, Japan  
 SOURCE: Nonlinear Opt., Proc. Toyota Conf. Nonlinear Opt.  
 Mater., 5th (1992), Meeting Date 1991, 249-54.  
 Editor(s): Miyata, Seizo. North-Holland: Amsterdam,  
 Neth.  
 CODEN: 58EMA7  
 DOCUMENT TYPE: Conference  
 LANGUAGE: English  
 AB Chiral-amine salts of .alpha.-cyanocinnamic acid derivs. with conjugated  
 double bonds were prepd. and their second harmonic generation (SHG) was  
 investigated. Their hyperpolarizability (.beta.) was calcd. by the PPP  
 MO method and indicates that the intramol. charge transfer is influenced by  
 the substituents at the Ph group as well as the conjugation length. To  
 break the centrosymmetry, chiral amines were introduced by salt  
 formation.  
 By x-ray anal., the cyano groups were found to point toward the same  
 direction playing an important role in SHG.  
 IT **126058-08-0P 144254-61-5P**  
 RL: PREP (Preparation)  
 (prepn. and second harmonic generation from)  
 RN 126058-08-0 CAPLUS  
 CN 2,4-Pentadienoic acid, 2-cyano-5-phenyl-, compd. with (S)-.alpha.-  
 methylbenzenemethanamine (1:1) (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 24139-57-9  
 CMF C12 H9 N O2

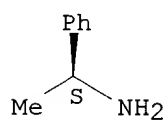


CM 2

CRN 2627-86-3

CMF C8 H11 N

Absolute stereochemistry.



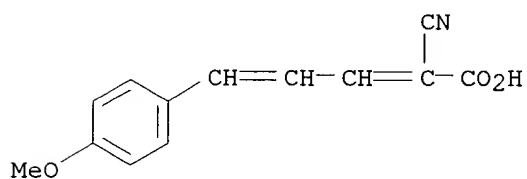
RN 144254-61-5 CAPLUS

CN 2,4-Pentadienoic acid, 2-cyano-5-(4-methoxyphenyl)-, compd. with  
(S)-.alpha.-methylbenzenemethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 126057-96-3

CMF C13 H11 N O3

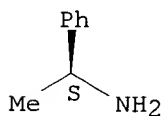


CM 2

CRN 2627-86-3

CMF C8 H11 N

Absolute stereochemistry.



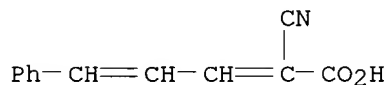
IT **24139-57-9P 126057-96-3P**

RL: PREP (Preparation)

(prepn. and second harmonic generation from chiral amine salts of)

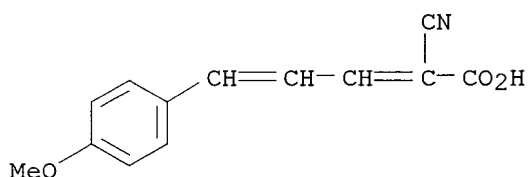
RN 24139-57-9 CAPLUS

CN 2,4-Pentadienoic acid, 2-cyano-5-phenyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



RN 126057-96-3 CAPLUS

CN 2,4-Pentadienoic acid, 2-cyano-5-(4-methoxyphenyl)- (9CI) (CA INDEX NAME)



L4 ANSWER 23 OF 70 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1992:540307 CAPLUS

DOCUMENT NUMBER: 117:140307

TITLE: Organic nonlinear optical material comprising p-nitroaniline solid solution containing conjugated aromatic compound

INVENTOR(S): Takeya, Yutaka

PATENT ASSIGNEE(S): Teijin K. K., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04090517	A2	19920324	JP 1990-205162	19900803

OTHER SOURCE(S): MARPAT 117:140307

AB The title material comprises a solid soln. of p-nitroaniline and XYAr(CH:CH)aCH:CHCO2Z (Ar = C5-14 arom. group; X, Y = R1O, NR2R3, R4S, nitrile, NO2, CO2R5OCOR6, CONR7R8NR9COR10, R11; R1-11 = H, C1-8 monovalent

hydrocarbon; Z = H, C1-4 hydrocarbon, C5-14 arom. hydrocarbon, n = 0, 1, 2). The material, e.g., a solid soln. of p-nitroaniline and 3-(4-nitrophenyl)-.alpha.-cyanopropenoic acid, is useful for an optical switch or bistable optical device.

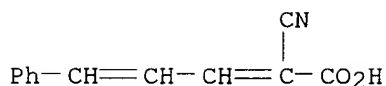
IT **24139-57-9**

RL: PRP (Properties)

(solid soln. with nitroaniline, nonlinear optical material)

RN 24139-57-9 CAPLUS

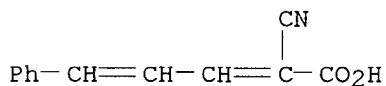
CN 2,4-Pentadienoic acid, 2-cyano-5-phenyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



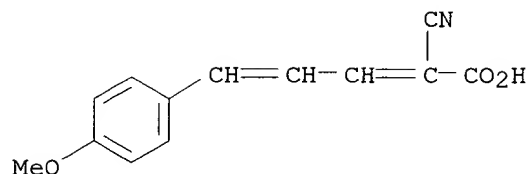
L4 ANSWER 24 OF 70 CAPLUS COPYRIGHT 2002 ACS  
 ACCESSION NUMBER: 1992:416907 CAPLUS  
 DOCUMENT NUMBER: 117:16907  
 TITLE: Aromatic nonlinear optical material containing  
 carboxylic acid and urea derivative  
 INVENTOR(S): Takeya, Yutaka  
 PATENT ASSIGNEE(S): Teijin Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04036731	A2	19920206	JP 1990-141598	19900601

OTHER SOURCE(S): MARPAT 117:16907  
 AB The material consists of an urea deriv. and a carboxylic acid  
 XX1Z(CH:CH)nCH:C(CO2H)CN (n = 0, 1, 2; Z = C5-14 arom. group; X, X1 =  
 R10,  
 NR2R3, SR4, CN, NO2, CO2R5, OCOR6, CONR7R8, N(R9)COR10, R11; R1-11 = C1-8  
 hydrocarbon group, H). A material contg.  
 2-cyano-5-(4-methoxyphenyl)-2,4-  
 pentadienoic acid and 1,1-dimethylurea showed high 2nd harmonic  
 generation.  
 IT **24139-57-9**  
 RL: USES (Uses)  
 (nonlinear optical material contg. urea deriv. and, with high second  
 harmonic generation)  
 RN 24139-57-9 CAPLUS  
 CN 2,4-Pentadienoic acid, 2-cyano-5-phenyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX  
 NAME)

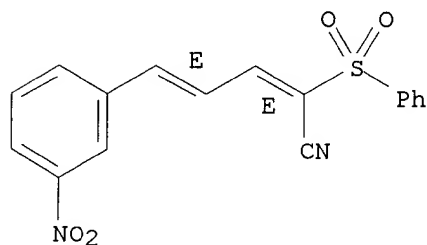


IT **126057-96-3P**  
 RL: PREP (Preparation)  
 (prepn. of, nonlinear optical material contg. urea deriv. and, with  
 high second harmonic generation)  
 RN 126057-96-3 CAPLUS  
 CN 2,4-Pentadienoic acid, 2-cyano-5-(4-methoxyphenyl)- (9CI) (CA INDEX  
 NAME)



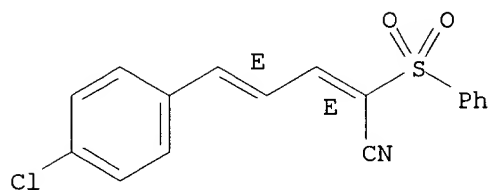
L4 ANSWER 25 OF 70 CAPLUS COPYRIGHT 2002 ACS  
 ACCESSION NUMBER: 1992:173723 CAPLUS  
 DOCUMENT NUMBER: 116:173723  
 TITLE: Catalytic synthesis of .alpha.-cyano-.alpha.,.beta.-unsaturated sulfones in the presence of organotellurium oxide  
 AUTHOR(S): Zhong, Qi; Lu, Yongjun; Liu, Changqing; Tao, Weiguo; Zou, Yongjun  
 CORPORATE SOURCE: Chem. Dep., Yangzhou Teach. Coll., Yangzhou, 225002, Peop. Rep. China  
 SOURCE: Chinese Chemical Letters (1991), 2(9), 683-4  
 CODEN: CCLEE7; ISSN: 1001-8417  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 116:173723  
 AB Condensation of PhSO<sub>2</sub>CH<sub>2</sub>CN (I) with RC<sub>6</sub>H<sub>4</sub>CHO (R = H, 4-NO<sub>2</sub>, 3-NO<sub>2</sub>, 4-Cl, 4-Br, 3-Cl, 4-Me, 4-MeO) in MeCN in the presence of bis(p-methoxyphenyl)telluroxide gave (E)-RC<sub>6</sub>H<sub>4</sub>CH:C(CN)SO<sub>2</sub>Ph in 90-99% yields. Similarly, condensation of I with R1C<sub>6</sub>H<sub>4</sub>CH:CHCHO (R1 = H, 3-NO<sub>2</sub>, 4-Cl, 4-MeO) gave (E,E)-R1C<sub>6</sub>H<sub>4</sub>CH:CHCH:C(CN)SO<sub>2</sub>Ph in 96-99% yields.  
 IT **140138-83-6P 140138-84-7P 140138-85-8P 140138-86-9P**  
 RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. of)  
 RN 140138-83-6 CAPLUS  
 CN 2,4-Pentadienenitrile, 5-(3-nitrophenyl)-2-(phenylsulfonyl)-, (E,E)-(9CI)  
 (CA INDEX NAME)

Double bond geometry as shown.



RN 140138-84-7 CAPLUS  
 CN 2,4-Pentadienenitrile, 5-(4-chlorophenyl)-2-(phenylsulfonyl)-, (E,E)-(9CI) (CA INDEX NAME)

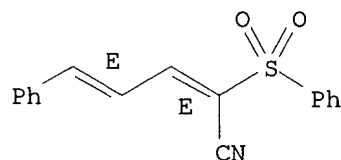
Double bond geometry as shown.



RN 140138-85-8 CAPLUS

CN 2,4-Pentadienenitrile, 5-phenyl-2-(phenylsulfonyl)-, (E,E)- (9CI) (CA INDEX NAME)

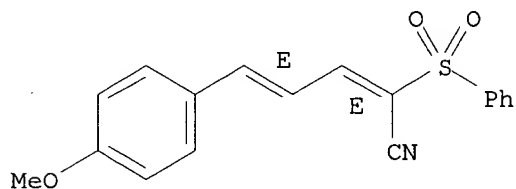
Double bond geometry as shown.



RN 140138-86-9 CAPLUS

CN 2,4-Pentadienenitrile, 5-(4-methoxyphenyl)-2-(phenylsulfonyl)-, (E,E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



L4 ANSWER 26 OF 70 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1992:162099 CAPLUS

DOCUMENT NUMBER: 116:162099

TITLE: Aromatic nonlinear optical material containing solid solution of carboxylic acid and cyanoamine

INVENTOR(S): Takeya, Yutaka

PATENT ASSIGNEE(S): Teijin Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

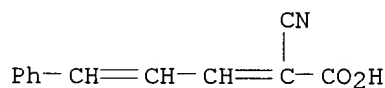
PATENT INFORMATION:

PATENT NO.

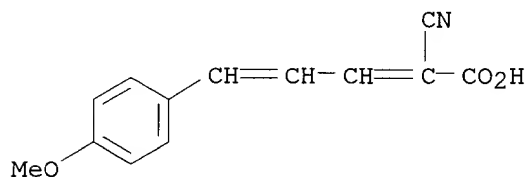
KIND DATE

APPLICATION NO. DATE

-----  
 JP 03259126      A2    19911119      JP 1990-56415      19900309  
 OTHER SOURCE(S):      MARPAT 116:162099  
 AB    The material consists of a solid soln. of carboxylic acid  
 XX1Z(CH:CH)nCH:C(CO2H)CN [n = 0-2; Z = C5-14 arom. group; X, X1 = R10,  
 NR2R3, SR4, CN, NO2, CO2R5, OCOR6, CONR7R8, N(R9)COR10, R11; R1-11 = C1-8  
 hydrocarbon group, H] and arom. cyanoamine NH2Z1(Z2m)CN (Z1 = C6-12 arom.  
 group; Z2 = halo, H; m = 1-8). A material contg. 2-cyano-5-(4-  
 methoxyphenyl)-2,4-pentadienonic acid and p-cyanoaniline showed high 2nd  
 harmonic generation.  
 IT    **24139-57-9**  
 RL: USES (Uses)  
       (nonlinear optical material contg. cyanoamine and, with high second  
       harmonic generation)  
 RN    24139-57-9    CAPLUS  
 CN    2,4-Pentadienoic acid, 2-cyano-5-phenyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX  
 NAME)



IT    **126057-96-3P**  
 RL: PREP (Preparation)  
       (prepn. of, nonlinear optical material contg. cyanoamine and, with  
 high  
       second harmonic generation)  
 RN    126057-96-3    CAPLUS  
 CN    2,4-Pentadienoic acid, 2-cyano-5-(4-methoxyphenyl)- (9CI) (CA INDEX  
 NAME)



L4    ANSWER 27 OF 70    CAPLUS    COPYRIGHT 2002 ACS  
 ACCESSION NUMBER:      1992:139697    CAPLUS  
 DOCUMENT NUMBER:      116:139697  
 TITLE:                  Aromatic nonlinear optical material containing  
                           nitroaniline and cyanocarboxylic acid  
 INVENTOR(S):            Takeya, Yutaka  
 PATENT ASSIGNEE(S):    Teijin Ltd., Japan  
 SOURCE:                  Jpn. Kokai Tokkyo Koho, 5 pp.  
                           CODEN: JKXXAF  
 DOCUMENT TYPE:         Patent  
 LANGUAGE:                Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	JP 03230127	A2	19911014	JP 1990-24442	19900205

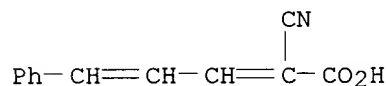
OTHER SOURCE(S): MARPAT 116:139697

AB The title material comprises a solid soln. of p-nitroaniline and XYAr(CH:CH)<sub>n</sub>CH:C(CN)CO<sub>2</sub>H (Ar = C5-14 arom. group; X, Y = R<sub>10</sub>, NR<sub>2</sub>R<sub>3</sub>, SR<sub>4</sub>, cyano, NO<sub>2</sub>, CO<sub>2</sub>R<sub>5</sub>, OCOR<sub>6</sub>, CONR<sub>7</sub>R<sub>8</sub>, NR<sub>9</sub>COR<sub>10</sub>, R<sub>11</sub>; R<sub>1-11</sub> = H, C<sub>1-8</sub> hydrocarbon). The solid soln., e.g., a mixt. of 2-cyano-5-(4-methoxyphenyl)-2,4-pentadienoic acid and p-nitroaniline, showed strong second harmonic generation.

IT **24139-57-9**  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (nonlinear optical material, with strong second harmonic generation)

RN 24139-57-9 CAPLUS

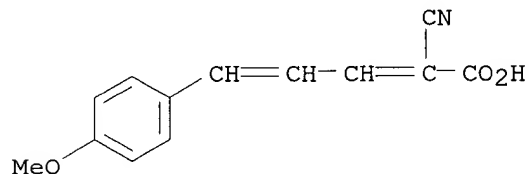
CN 2,4-Pentadienoic acid, 2-cyano-5-phenyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



IT **126057-96-3P**  
 RL: PREP (Preparation)  
 (prepn. of, for nonlinear optical material, with strong second harmonic generation)

RN 126057-96-3 CAPLUS

CN 2,4-Pentadienoic acid, 2-cyano-5-(4-methoxyphenyl)- (9CI) (CA INDEX NAME)



L4 ANSWER 28 OF 70 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1992:116750 CAPLUS

DOCUMENT NUMBER: 116:116750

TITLE: Second harmonic-generating nonlinear optical material

INVENTOR(S): Takeya, Yutaka

PATENT ASSIGNEE(S): Teijin Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.  
 CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:



	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GI	JP 03126926	A2	19910530	JP 1989-265106	19891013

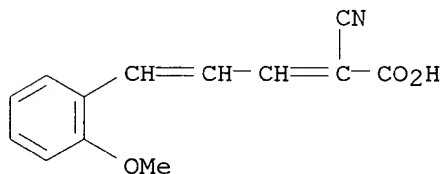


AB The title material consists of a compd.  $Q(CH:CH)_n(CH:C(CN))_mZ$  ( $Q = ROA, R1A, I$ ;  $R = C1-8$  hydrocarbyl;  $Z = C5-14$  arom.;  $R1, M = NR3R4, OR5, SR6, CN, CO2R7, OCOR8, CON(R7)R10, N(R11)COR12, R13, H$ ;  $R3-13 = C1-8$  hydrocarbyl;  $X = S, O, NR2$ ;  $R2 = H, C1-8$  hydrocarbyl;  $l = 0-3$ ;  $n = 0-2$ ;  $m = 0, 1$ ; when  $m = 0, Z = CHO$ ; when  $m = 1, Z = CO2H, CO2G$ ;  $G = C16-24$  hydrocarbyl).

IT **139269-39-9**  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (optical nonlinear material)

RN 139269-39-9 CAPLUS

CN 2,4-Pentadienoic acid, 2-cyano-5-(2-methoxyphenyl)- (9CI) (CA INDEX NAME)



L4 ANSWER 29 OF 70 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1992:107441 CAPLUS

DOCUMENT NUMBER: 116:107441

TITLE: Photocurable polymers for use in nonlinear optics

INVENTOR(S): Le Bamy, Pierre; Broussoux, Dominique; Coqueret, Xavier

PATENT ASSIGNEE(S): Thomson CSF S. A., Fr.

SOURCE: Fr. Demande, 26 pp.  
 CODEN: FRXXBL

DOCUMENT TYPE: Patent

LANGUAGE: French

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
AB	FR 2659340	A1	19910913	FR 1990-2807	19900306
	FR 2659340	B1	19930507		

The title polymers, with low glass temps. and practical 2nd-order

susceptibilities, are siloxanes bearing pendent photocurable groups and, optionally, mesogenic groups. Stirring 177 mg Me hydrogen siloxane, 102 mg 4-nitro-4'-[ethyl[2-(6-heptenoxyloxy)ethyl]amino]azobenzene, 390 mg PhCH:CHCH:C(CN)CO<sub>2</sub>CH<sub>2</sub>Si(Me)<sub>2</sub>CH:CH<sub>2</sub>, and 400 mg 4'-cyano-4-biphenyl 6-heptenoate with a Pt catalyst in PhMe at 110.degree. for 44 h gave a photocurable polymer with glass temp. 6.degree..

IT **24139-57-9P**

RL: PREP (Preparation)

(prepn. of, and reaction with (chloromethyl)dimethylvinylsilane)

RN 24139-57-9 CAPLUS

CN 2,4-Pentadienoic acid, 2-cyano-5-phenyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



L4 ANSWER 30 OF 70 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1991:536937 CAPLUS

DOCUMENT NUMBER: 115:136937

TITLE: Some aspects of the reactivity of photo-dimerizable esters grafted onto silicone main chain polymers

AUTHOR(S): Coqueret, Xavier; El Achari, Ahmida; Hajaiej, Adel; Lablache-Combier, Alain; Loucheux, Claude; Randrianarisoa, Lili

CORPORATE SOURCE: Lab. Chim. Macromol., Univ. Sci. Tech. Lille Flandres Artois, Villeneuve d'Ascq, F-59655, Fr.

SOURCE: Makromolekulare Chemie (1991), 192(7), 1517-34  
CODEN: MACEAK; ISSN: 0025-116X

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The reactivity under UV light and at room temp. of 2 series of photo-crosslinkable silicone polymers contg. pendant cinnamic or .alpha.-cyano-.beta.-styrylacrylic (CSA) esters was examd. by means of UV spectroscopy. Polymers with trans-cinnamic pendant groups underwent a fast photo-isomerization during the first moments of 280-nm irradiation, preceding the dimerization process which takes place with a slower rate. The mobility of the reactive cinnamic chromophores attached to the highly flexible silicone main chain led to a collision-controlled process contrasting with the behavior of the polymers contg. more polar CSA esters. In this case, a clean dimerization with high reversibility suggested a matrix-controlled process. This was supported by kinetic

data indicating a levelled reactivity for several polymers contg. different amts. of CSA esters.

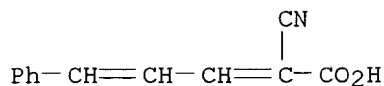
IT **24139-57-9DP**, esters with allyl glycidyl ether-siloxane reaction products

RL: SPN (Synthetic preparation); PREP (Preparation)

(prepn. and photodimerization of, kinetics of)

RN 24139-57-9 CAPLUS

CN 2,4-Pentadienoic acid, 2-cyano-5-phenyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



L4 ANSWER 31 OF 70 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1991:418282 CAPLUS

DOCUMENT NUMBER: 115:18282

TITLE: Organic nonlinear optical material

INVENTOR(S): Takeya, Yutaka; Matsuzawa, Hiroshi; Iwata, Kaoru

PATENT ASSIGNEE(S): Teijin Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 24 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

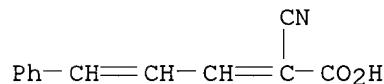
PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	JP 02254425	A2	19901015	JP 1989-74875	19890329
AB	The title nonlinear optical material is a salt or amide obtained by reacting an .alpha.-cyanocarboxylic acid contg. a conjugated double bond(s) with an optically active amine. The material has improved 2nd harmonic generation capability and is useful in optical switches, memories, and bistable devices.				
IT	<b>126058-08-0 126058-20-6 126058-21-7</b> <b>126058-46-6 126058-61-5 126058-70-6</b> <b>134250-60-5 134309-71-0</b>				
	RL: TEM (Technical or engineered material use); USES (Uses) (optical nonlinear material)				
RN	126058-08-0 CAPLUS				
CN	2,4-Pentadienoic acid, 2-cyano-5-phenyl-, compd. with (S)-.alpha.-methylbenzenemethanamine (1:1) (9CI) (CA INDEX NAME)				

CM 1

CRN 24139-57-9

CMF C12 H9 N O2

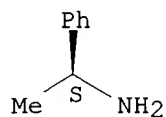


CM 2

CRN 2627-86-3

CMF C8 H11 N

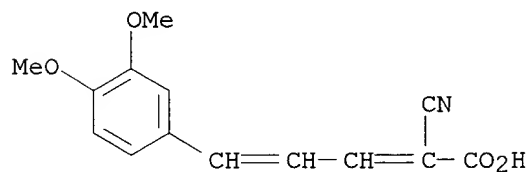
Absolute stereochemistry.



RN 126058-20-6 CAPLUS  
 CN 2,4-Pentadienoic acid, 2-cyano-5-(3,4-dimethoxyphenyl)-, compd. with  
 .alpha.-methylbenzenemethanamine (1:1) (9CI) (CA INDEX NAME)

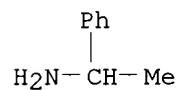
CM 1

CRN 126057-98-5  
 CMF C14 H13 N O4



CM 2

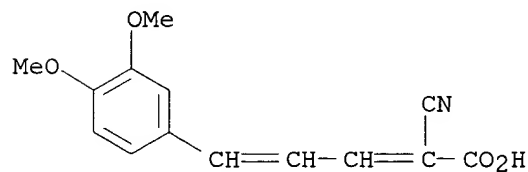
CRN 618-36-0  
 CMF C8 H11 N



RN 126058-21-7 CAPLUS  
 CN 2,4-Pentadienoic acid, 2-cyano-5-(3,4-dimethoxyphenyl)-, compd. with  
 .alpha.-methyl-1-naphthalenemethanamine (1:1) (9CI) (CA INDEX NAME)

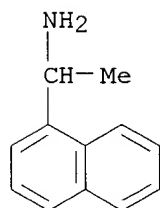
CM 1

CRN 126057-98-5  
 CMF C14 H13 N O4



CM 2

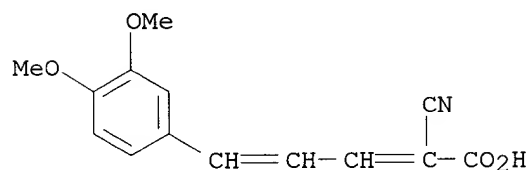
CRN 42882-31-5  
CMF C12 H13 N



RN 126058-46-6 CAPLUS  
CN 2,4-Pentadienoic acid, 2-cyano-5-(3,4-dimethoxyphenyl)-, compd. with  
(R)-2-amino-1-butanol (1:1) (9CI) (CA INDEX NAME)

CM 1

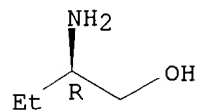
CRN 126057-98-5  
CMF C14 H13 N O4



CM 2

CRN 5856-63-3  
CMF C4 H11 N O

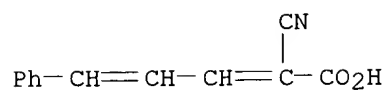
Absolute stereochemistry. Rotation (-).



RN 126058-61-5 CAPLUS  
CN L-Valine, methyl ester, 2-cyano-5-phenyl-2,4-pentadienoate (9CI) (CA  
INDEX NAME)

CM 1

CRN 24139-57-9  
CMF C12 H9 N O2

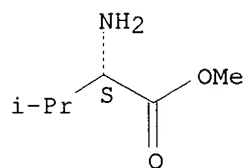


CM 2

CRN 4070-48-8

CMF C6 H13 N O2

Absolute stereochemistry. Rotation (+).



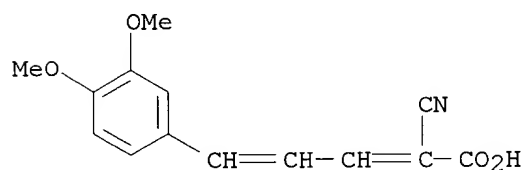
RN 126058-70-6 CAPLUS

CN L-Arginine, N2-benzoyl-, ethyl ester,  
mono[2-cyano-5-(3,4-dimethoxyphenyl)-  
2,4-pentadienoate] (9CI) (CA INDEX NAME)

CM 1

CRN 126057-98-5

CMF C14 H13 N O4

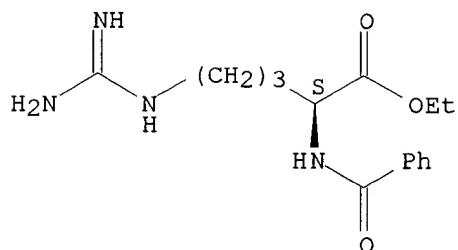


CM 2

CRN 971-21-1

CMF C15 H22 N4 O3

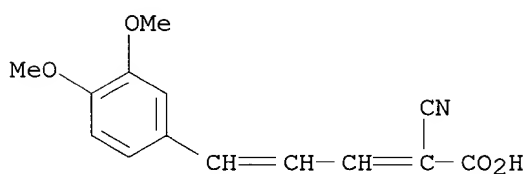
Absolute stereochemistry.



RN 134250-60-5 CAPLUS  
 CN 2,4-Pentadienoic acid, 2-cyano-5-(3,4-dimethoxyphenyl)-, compd. with  
 (R)-1-amino-2-propanol (1:1) (9CI) (CA INDEX NAME)

CM 1

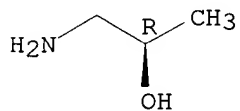
CRN 126057-98-5  
 CMF C14 H13 N O4



CM 2

CRN 2799-16-8  
 CMF C3 H9 N O

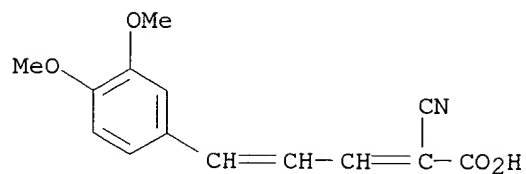
Absolute stereochemistry. Rotation (-).



RN 134309-71-0 CAPLUS  
 CN Benzeneacetic acid, .alpha.-amino-, methyl ester, (R)-,  
 2-cyano-5-(3,4-dimethoxyphenyl)-2,4-pentadienoate (9CI) (CA INDEX NAME)

CM 1

CRN 126057-98-5  
 CMF C14 H13 N O4

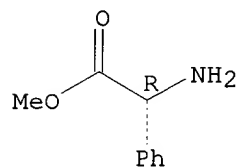


CM 2

CRN 24461-61-8

CMF C9 H11 N O2

Absolute stereochemistry. Rotation (-).



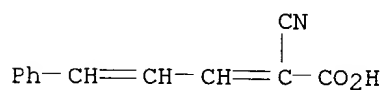
IT 24139-57-9P 126057-96-3P 126057-98-5P

RL: PREP (Preparation)

(prepn. of)

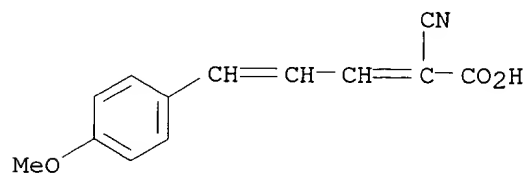
RN 24139-57-9 CAPLUS

CN 2,4-Pentadienoic acid, 2-cyano-5-phenyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



RN 126057-96-3 CAPLUS

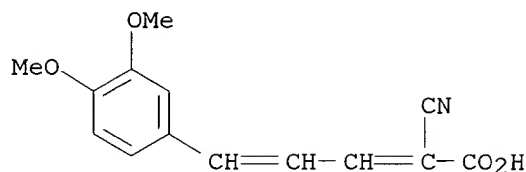
CN 2,4-Pentadienoic acid, 2-cyano-5-(4-methoxyphenyl)- (9CI) (CA INDEX NAME)



RN 126057-98-5 CAPLUS

CN 2,4-Pentadienoic acid, 2-cyano-5-(3,4-dimethoxyphenyl)- (9CI) (CA INDEX NAME)

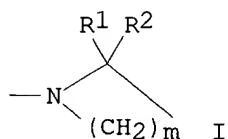




L4 ANSWER 32 OF 70 CAPLUS COPYRIGHT 2002 ACS  
 ACCESSION NUMBER: 1991:237358 CAPLUS  
 DOCUMENT NUMBER: 114:237358  
 TITLE: Nonlinear optical materials containing amide groups  
 INVENTOR(S): Takeya, Yutaka; Matsuzawa, Hiroshi; Iwata, Kaoru  
 PATENT ASSIGNEE(S): Teijin Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 10  
 PATENT INFORMATION:

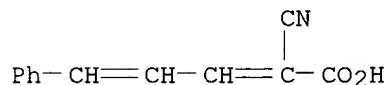
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 02171731	A2	19900703	JP 1988-326099	19881226
US 5196147	A	19930323	US 1989-329746	19890328
PRIORITY APPLN. INFO.:			JP 1988-72080	19880328
			JP 1988-118327	19880517
			JP 1988-130090	19880530
			JP 1988-223592	19880908
			JP 1988-223593	19880908
			JP 1988-226491	19880912
			JP 1988-227428	19880913
			JP 1988-286902	19881115
			JP 1988-286903	19881115
			JP 1988-288978	19881117
			JP 1988-288979	19881117
			JP 1988-326099	19881226

OTHER SOURCE(S): MARPAT 114:237358  
 GI

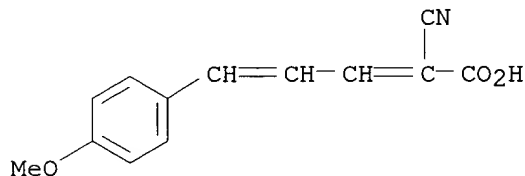


AB Nonlinear optical materials  $R_1A(CH:CH)_nCH:C(CN)CO_2Z$ , where A = C5-14 arom. moiety;  $R_1 = H$ , C1-8 hydrocarbon, NR2R3, OR2, SR2, nitrile, NO2, CO2R2, OCOR2, CONR2R3, NR2COR3;  $R_2, R_3 = H$ , C1-8 hydrocarbons; Z = NHCR4R5R6, NHCH2CR4R5R6, I, .alpha.-amino acid derivs.;  $R_4-6 = H$ , C1-5 alkyl, Ph, naphthyl, OH, CH2OH, CO2R2, CNR2R3;  $m = 3-4$ ; and  $n = 0, 1, 2$  are claimed. The claimed materials are asym. mols. having high 2nd harmonic generation

characteristics and mol. polarizability.  
 IT **24139-57-9 126057-96-3**  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (acid chlorination of, for nonlinear optical materials)  
 RN 24139-57-9 CAPLUS  
 CN 2,4-Pentadienoic acid, 2-cyano-5-phenyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



RN 126057-96-3 CAPLUS  
 CN 2,4-Pentadienoic acid, 2-cyano-5-(4-methoxyphenyl)- (9CI) (CA INDEX NAME)



L4 ANSWER 33 OF 70 CAPLUS COPYRIGHT 2002 ACS  
 ACCESSION NUMBER: 1991:193378 CAPLUS  
 DOCUMENT NUMBER: 114:193378  
 TITLE: Aromatic acid amine salt multilayer film with structural periodicity  
 INVENTOR(S): Takeya, Yutaka; Matsuzawa, Hiroshi; Iwata, Kaoru  
 PATENT ASSIGNEE(S): Teijin Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 02193954	A2	19900731	JP 1989-11861	19890123

OTHER SOURCE(S): MARPAT 114:193378  
 AB The multilayer film, with periodical structure in the thickness orientation, comprises C10-22 linear alkylamine salt of arom. conjugated acid R(CH:CH)lCH:C(CN)CO2H [l = 0,1,2; R = (substituted) arom. residue]. Me cyanate and p-dimethylaminocinnamoyl aldehyde were treated to give 5-(4-dimethylaminophenyl)-2-cyano-2,4-pentadienoic acid (I). The soln. of I and a soln. of C18H37COCHNHCOC6H4C18H37CO(CH2)2O(CH2)4NMe3Br were repeatedly contacted to give the multilayer film useful for elec. materials, waveguides, optoelec. devices, etc.  
 IT **133398-99-9**

RL: PRP (Properties)

(multilayer film from, with periodic structure in thickness orientation)

RN 133398-99-9 CAPLUS

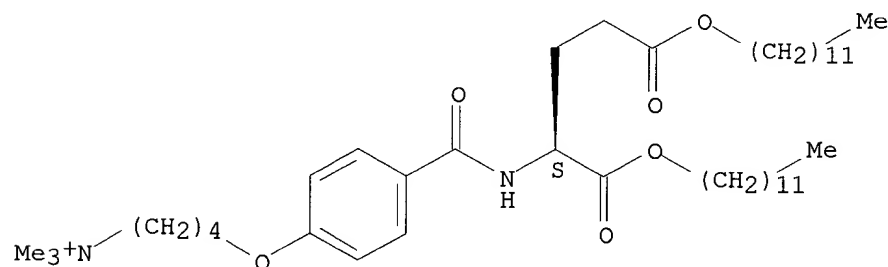
CN 1-Butanaminium, 4-[4-[[[4-(dodecyloxy)-1-[(dodecyloxy)carbonyl]-4-oxobutyl]amino]carbonyl]phenoxy]-N,N,N-trimethyl-, bromide, (S)-, mono(2-cyano-5-phenyl-2,4-pentadienoate) (9CI) (CA INDEX NAME)

CM 1

CRN 75082-74-5

CMF C43 H77 N2 O6 . Br

Absolute stereochemistry.

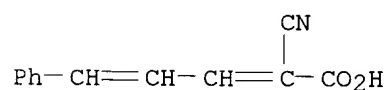


● Br<sup>-</sup>

CM 2

CRN 24139-57-9

CMF C12 H9 N O2



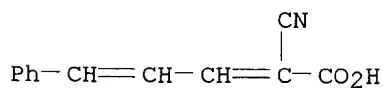
IT **24139-57-9P**

RL: PREP (Preparation)

(prepn. of, multilayer film from with amines and)

RN 24139-57-9 CAPLUS

CN 2,4-Pentadienoic acid, 2-cyano-5-phenyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



L4 ANSWER 34 OF 70 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1991:91599 CAPLUS  
 DOCUMENT NUMBER: 114:91599  
 TITLE: Nonlinear optical material using conjugated amine salt  
 INVENTOR(S): Takeya, Yutaka; Matsuzawa, Hiroshi; Iwata, Kaoru  
 PATENT ASSIGNEE(S): Teijin Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 10  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 02135427	A2	19900524	JP 1988-288979	19881117
US 5196147	A	19930323	US 1989-329746	19890328
PRIORITY APPLN. INFO.:			JP 1988-72080	19880328
			JP 1988-118327	19880517
			JP 1988-130090	19880530
			JP 1988-223592	19880908
			JP 1988-223593	19880908
			JP 1988-226491	19880912
			JP 1988-227428	19880913
			JP 1988-286902	19881115
			JP 1988-286903	19881115
			JP 1988-288978	19881117
			JP 1988-288979	19881117
			JP 1988-326099	19881226

OTHER SOURCE(S): MARPAT 114:91599

AB The material comprises a salt of carboxylic acid  $XZY(CH:CH)_nCH:C(CN)CO_2H$  ( $n = 0, 1, 2$ ;  $Z = C5-14$  arom. group;  $X, Y = R1O, R2R3N, R4S, NO_2$ ;  $R1-4 = H, C1-8$  hydrocarbon group) and optically active amine of 1-phenylethylamine, 1-(.alpha.-naphthyl)ethylamine, 1-phenyl-2-methylethylamine, 1-phenyl-2-aminopropane, and/or brucine. An amine salt of R-(-)-1-phenylethylamine and 3-(3,4-dimethoxyphenyl)-2-cyanopropenoic acid showed high second harmonic generation.

IT **126058-20-6 126058-21-7**

RL: TEM (Technical or engineered material use); USES (Uses)  
 (nonlinear optical material, with high second harmonic generation)

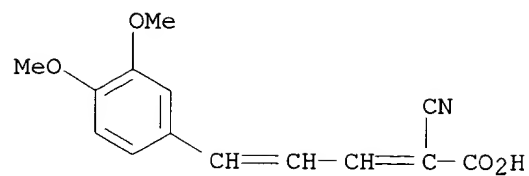
RN 126058-20-6 CAPLUS

CN 2,4-Pentadienoic acid, 2-cyano-5-(3,4-dimethoxyphenyl)-, compd. with .alpha.-methylbenzenemethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 126057-98-5

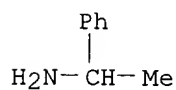
CMF C14 H13 N O4



CM 2

CRN 618-36-0

CMF C8 H11 N



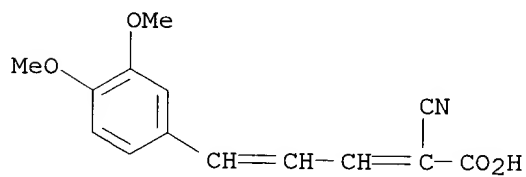
RN 126058-21-7 CAPLUS

CN 2,4-Pentadienoic acid, 2-cyano-5-(3,4-dimethoxyphenyl)-, compd. with  
.alpha.-methyl-1-naphthalenemethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 126057-98-5

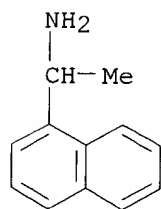
CMF C14 H13 N O4



CM 2

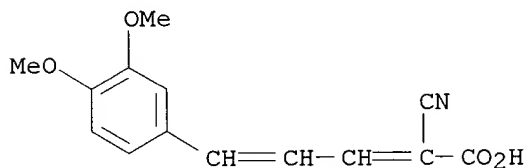
CRN 42882-31-5

CMF C12 H13 N



IT **126057-98-5P**  
RL: PREP (Preparation)

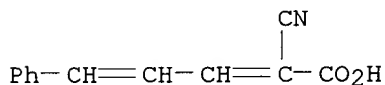
(prepn. of, nonlinear optical amine salt of)  
 RN 126057-98-5 CAPLUS  
 CN 2,4-Pentadienoic acid, 2-cyano-5-(3,4-dimethoxyphenyl)- (9CI) (CA INDEX NAME)



L4 ANSWER 35 OF 70 CAPLUS COPYRIGHT 2002 ACS  
 ACCESSION NUMBER: 1991:49360 CAPLUS  
 DOCUMENT NUMBER: 114:49360  
 TITLE: Ultraviolet radiation absorbing compositions  
 INVENTOR(S): Phalangas, Charalambos J.; Restaino, Alfred J.; Yang, Lau S.  
 PATENT ASSIGNEE(S): ICI Americas, Inc., USA  
 SOURCE: U.S., 9 pp.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

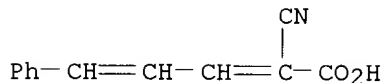
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4950467	A	19900821	US 1986-930523	19861114

OTHER SOURCE(S): MARPAT 114:49360  
 AB Sunscreen compns. are described, which contain 5-phenylpentadienoate esters which act as UV filters when incorporated in a carrier in amts. ranging from 0.1-50% by wt. The Markush structures of 5-phenylpentadienoate esters are described. The compns. of 16 sunscreens are given and 21 esters prepd.  
 IT **24139-57-9P**, 2-Cyano-5-phenyl-2,4-pentadienoic acid  
 RL: PREP (Preparation)  
 (prepn. of, as intermediate for sunscreen phenylpentadienoates)  
 RN 24139-57-9 CAPLUS  
 CN 2,4-Pentadienoic acid, 2-cyano-5-phenyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



IT **24139-57-9**, 2-Cyano-5-phenyl-2,4-pentadienoic acid  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, in prepn. of sunscreen phenylpentadienoate)  
 RN 24139-57-9 CAPLUS  
 CN 2,4-Pentadienoic acid, 2-cyano-5-phenyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

NAME)



L4 ANSWER 36 OF 70 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1990:592459 CAPLUS

DOCUMENT NUMBER: 113:192459

TITLE: Synthesis and properties of photoreactive polysiloxanes containing pendant functional groups  
AUTHOR(S): Coqueret, Xavier; Hajaier, Adel; Lablache-Combier, Alain; Loucheux, Claude; Mercier, Regis; Pouliquen, Lydie; Randrianarisoa-Ramanantsoa, Lili

CORPORATE SOURCE: Lab. Chim. Org. Macromol., Univ. Sci. Tech. Lille Flandres-Artois, Villeneuve d'Ascq, 59655, Fr.

SOURCE: Pure and Applied Chemistry (1990), 62(8), 1603-14  
CODEN: PACHAS; ISSN: 0033-4545

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Functional polysiloxanes contg. photoreactive pendant groups were prepd. by multistep modification of silicone copolymers contg. methylhydrosiloxane units. One method based on Pt-catalyzed hydrosilylation of vinylsilyl-terminated photoreactive esters allowed prepn. of liq. silicone polymers contg. photodimerizable esters. Another method based on the esterification of pendant epoxy groups previously grafted on the silicone main chain was a general and very powerful alternative route for prepn. of photo-reactive polysiloxanes. The method was applied to synthesize polysiloxanes contg. various functional side groups such as dimerizable esters, arom. carbonyl compds. or dyes which possess properties of photochem. interest. The reactivity, the ability

to be photosensitized as well as some practical properties of different photo-crosslinkable polysiloxanes modified either by cinnamic, furacrylic or .alpha.-cyano .beta.-styrylacrylic ester groups were examd. A kinetic investigation of the reactivity of the polysiloxane-bound dimerizable chromophores indicated the effect of the silicone matrix in comparison with more classical hydrocarbon photopolymers.

IT **24139-57-9DP**, reaction products with epoxy siloxanes

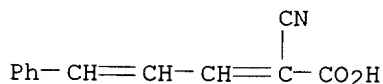
RL: SPN (Synthetic preparation); PREP (Preparation)

(photosensitive, prepn. and crosslinking of, mechanism and kinetics

of)

RN 24139-57-9 CAPLUS

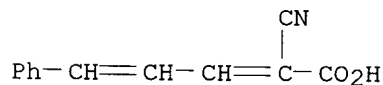
CN 2,4-Pentadienoic acid, 2-cyano-5-phenyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



L4 ANSWER 37 OF 70 CAPLUS COPYRIGHT 2002 ACS  
 ACCESSION NUMBER: 1990:506081 CAPLUS  
 DOCUMENT NUMBER: 113:106081  
 TITLE: Nonlinear optical materials based on optically active amino acid salts  
 INVENTOR(S): Takeya, Yutaka; Matsuzawa, Hiroshi; Iwata, Kaoru  
 PATENT ASSIGNEE(S): Teijin Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 10  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 01300234	A2	19891204	JP 1988-130090	19880530
US 5196147	A	19930323	US 1989-329746	19890328
PRIORITY APPLN. INFO.:			JP 1988-72080	19880328
			JP 1988-118327	19880517
			JP 1988-130090	19880530
			JP 1988-223592	19880908
			JP 1988-223593	19880908
			JP 1988-226491	19880912
			JP 1988-227428	19880913
			JP 1988-286902	19881115
			JP 1988-286903	19881115
			JP 1988-288978	19881117
			JP 1988-288979	19881117
			JP 1988-326099	19881226

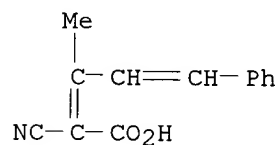
OTHER SOURCE(S): MARPAT 113:106081  
 AB The title materials comprise  $R_1A(CH:CH)_nCH:C(CN)CO_2H$  ( $n = 0, 1, 2$ ;  $A = C_5-14$  arom. group;  $R_1 = R_2NR_3, R_4O, R_5S, CN, NO_2, CO_2R_6, OCOR_7, CONR_8R_9, NR_{10}COR_{11}$ ;  $R_2-12 = C_1-8$  hydrocarbon residue, H). Me cyanoacetate and p-dimethylaminocinnamoyl aldehyde were treated to give 2-cyano-3-(4-dimethylaminocinnamoyl)-2-propenoic acid, which was treated with L-phenylalanine HCl salt to give a nonlinear optical crystal exhibiting strong 2nd harmonic generation.  
 IT **24139-57-9**  
 RL: PRP (Properties)  
 (neutralization with amines of, in nonlinear optical material prepn.)  
 RN 24139-57-9 CAPLUS  
 CN 2,4-Pentadienoic acid, 2-cyano-5-phenyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



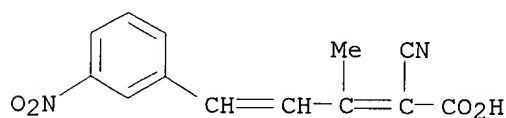
L4 ANSWER 38 OF 70 CAPLUS COPYRIGHT 2002 ACS  
 ACCESSION NUMBER: 1990:440075 CAPLUS  
 DOCUMENT NUMBER: 113:40075  
 TITLE: New method of preparing 2-cyano-3-methyl-2,4-



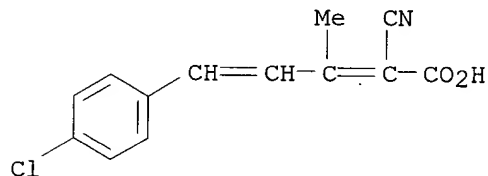
pentadienoic acid derivatives  
 AUTHOR(S): Avetisyan, A. A.; Akhnazaryan, A. A.; Melikyan, G. S.  
 CORPORATE SOURCE: Erevan. Gos. Univ., Yerevan, USSR  
 SOURCE: Armyanskii Khimicheskii Zhurnal (1989), 42(10),  
 659-60  
 CODEN: AYKZAN; ISSN: 0515-9628  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian  
 OTHER SOURCE(S): CASREACT 113:40075  
 AB Condensation reaction of RCHO (R = Ph, 3-O<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>, 4-ClC<sub>6</sub>H<sub>4</sub>, 2-furyl) with  
 Me<sub>2</sub>C:C(CN)CO<sub>2</sub>Et in 10% aq. NaOH gave 40-75% RCH:CHCMe:C(CN)CO<sub>2</sub>H (I); in  
 10% alc. NaOH, 81% I (R = Ph) was obtained.  
 IT **54681-21-9P 128039-69-0P 128039-70-3P**  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of)  
 RN 54681-21-9 CAPLUS  
 CN 2,4-Pentadienoic acid, 2-cyano-3-methyl-5-phenyl- (7CI, 9CI) (CA INDEX  
 NAME)



RN 128039-69-0 CAPLUS  
 CN 2,4-Pentadienoic acid, 2-cyano-3-methyl-5-(3-nitrophenyl)- (9CI) (CA  
 INDEX NAME)



RN 128039-70-3 CAPLUS  
 CN 2,4-Pentadienoic acid, 5-(4-chlorophenyl)-2-cyano-3-methyl- (9CI) (CA  
 INDEX NAME)



L4 ANSWER 39 OF 70 CAPLUS COPYRIGHT 2002 ACS  
 ACCESSION NUMBER: 1990:216448 CAPLUS  
 DOCUMENT NUMBER: 112:216448  
 TITLE: (Aryl)alkylidenecyanoacetic acid salts with chiral

amines as nonlinear optical materials having  
increased second harmonic generating ability and stability to  
laser light

INVENTOR(S): Taketani, Yutaka; Matsuzawa, Hiroshi; Iwata, Kaoru  
PATENT ASSIGNEE(S): Teijin Ltd., Japan  
SOURCE: Eur. Pat. Appl., 23 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 10  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 335641	A2	19891004	EP 1989-303013	19890328
EP 335641	A3	19910313		
EP 335641	B1	19940105		
R: DE, FR, GB				
JP 01245230	A2	19890929	JP 1988-72080	19880328
JP 01288831	A2	19891121	JP 1988-118327	19880517
JP 02138163	A2	19900528	JP 1988-288978	19881117
PRIORITY APPLN. INFO.:			JP 1988-72080	19880328
			JP 1988-118327	19880517
			JP 1988-288978	19881117

OTHER SOURCE(S): MARPAT 112:216448

AB A(CR1:CH)nCH:C(CN)CO2H.B [I; R1 = H, Me; B = optically active amine; A = H, alkyl, (substituted) (hetero)aryl; n = 0-2], useful as nonlinear optical materials having increased second harmonic generating ability and stability to laser light, were prepd. Thus, NCCH2CO2Me and p-dimethylaminocinnamaldehyde were stirred 40 h in aq. NaOH at 85.degree. followed by acidification to give 2-cyano-5-(4-dimethylaminophenyl)-2,4-pentadienoic acid. The latter in THF was treated with L-1-phenylethylamine to ppt. the 1:1 salt. The salt exhibited a second harmonic .apprx.3.times. that of m-nitroaniline upon exposure to 1.06.mu. laser light.

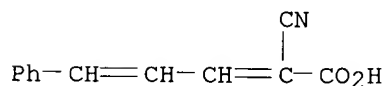
IT **24139-57-9P 126057-96-3P 126057-98-5P**

RL: SPN (Synthetic preparation); PREP (Preparation)

(prepn. and salification of, with chiral amine, in prepn. of nonlinear optical material)

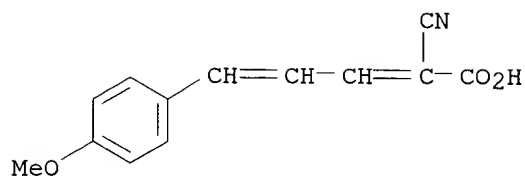
RN 24139-57-9 CAPLUS

CN 2,4-Pentadienoic acid, 2-cyano-5-phenyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

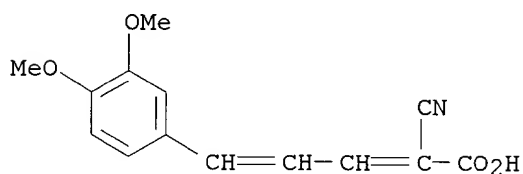


RN 126057-96-3 CAPLUS

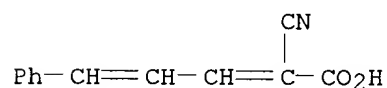
CN 2,4-Pentadienoic acid, 2-cyano-5-(4-methoxyphenyl)- (9CI) (CA INDEX NAME)



RN 126057-98-5 CAPLUS  
 CN 2,4-Pentadienoic acid, 2-cyano-5-(3,4-dimethoxyphenyl)- (9CI) (CA INDEX NAME)

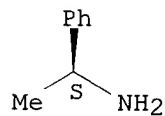


IT **126058-08-0P 126058-20-6P 126058-21-7P**  
**126058-46-6P 126058-47-7P 126058-61-5P**  
**126058-69-3P 126058-70-6P 126076-75-3P**  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of, as nonlinear optical material)  
 RN 126058-08-0 CAPLUS  
 CN 2,4-Pentadienoic acid, 2-cyano-5-phenyl-, compd. with (S)-.alpha.-methylbenzenemethanamine (1:1) (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 24139-57-9  
 CMF C12 H9 N O2



CM 2  
 CRN 2627-86-3  
 CMF C8 H11 N

Absolute stereochemistry.

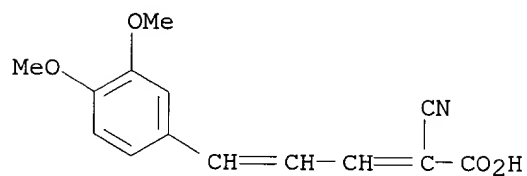


RN 126058-20-6 CAPLUS

CN 2,4-Pentadienoic acid, 2-cyano-5-(3,4-dimethoxyphenyl)-, compd. with  
.alpha.-methylbenzenemethanamine (1:1) (9CI) (CA INDEX NAME)

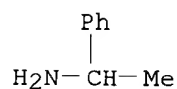
CM 1

CRN 126057-98-5  
CMF C14 H13 N O4



CM 2

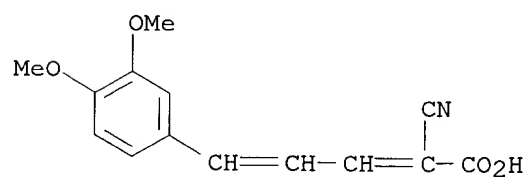
CRN 618-36-0  
CMF C8 H11 N



RN 126058-21-7 CAPLUS  
CN 2,4-Pentadienoic acid, 2-cyano-5-(3,4-dimethoxyphenyl)-, compd. with  
.alpha.-methyl-1-naphthalenemethanamine (1:1) (9CI) (CA INDEX NAME)

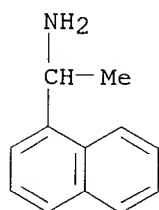
CM 1

CRN 126057-98-5  
CMF C14 H13 N O4



CM 2

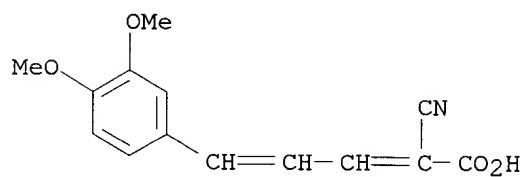
CRN 42882-31-5  
CMF C12 H13 N



RN 126058-46-6 CAPLUS  
 CN 2,4-Pentadienoic acid, 2-cyano-5-(3,4-dimethoxyphenyl)-, compd. with  
 (R)-2-amino-1-butanol (1:1) (9CI) (CA INDEX NAME)

CM 1

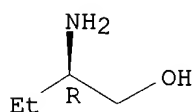
CRN 126057-98-5  
 CMF C14 H13 N O4



CM 2

CRN 5856-63-3  
 CMF C4 H11 N O

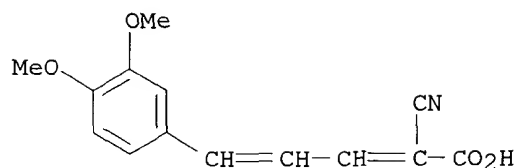
Absolute stereochemistry. Rotation (-).



RN 126058-47-7 CAPLUS  
 CN 2,4-Pentadienoic acid, 2-cyano-5-(3,4-dimethoxyphenyl)-, compd. with  
 (R)-2-amino-1-propanol (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 126057-98-5  
 CMF C14 H13 N O4

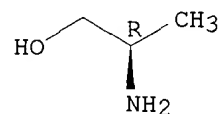


CM 2

CRN 35320-23-1

CMF C3 H9 N O

Absolute stereochemistry. Rotation (-).



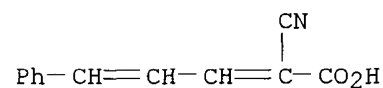
RN 126058-61-5 CAPLUS

CN L-Valine, methyl ester, 2-cyano-5-phenyl-2,4-pentadienoate (9CI) (CA INDEX NAME)

CM 1

CRN 24139-57-9

CMF C12 H9 N O2

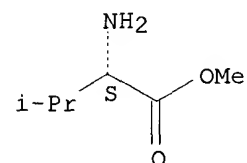


CM 2

CRN 4070-48-8

CMF C6 H13 N O2

Absolute stereochemistry. Rotation (+).

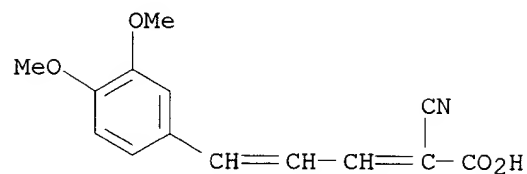


RN 126058-69-3 CAPLUS

CN Benzeneacetic acid, .alpha.-amino-, 2-cyano-5-(3,4-dimethoxyphenyl)-2,4-pentadienoate (9CI) (CA INDEX NAME)

CM 1

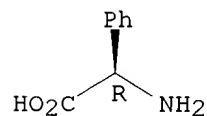
CRN 126057-98-5  
CMF C14 H13 N O4



CM 2

CRN 875-74-1  
CMF C8 H9 N O2

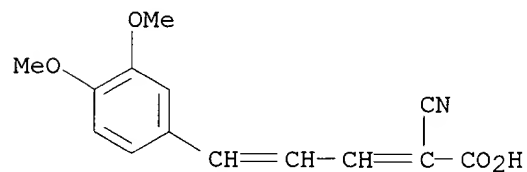
Absolute stereochemistry. Rotation (-).



RN 126058-70-6 CAPLUS  
CN L-Arginine, N2-benzoyl-, ethyl ester,  
mono[2-cyano-5-(3,4-dimethoxyphenyl)-  
2,4-pentadienoate] (9CI) (CA INDEX NAME)

CM 1

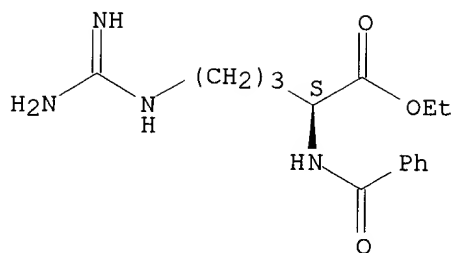
CRN 126057-98-5  
CMF C14 H13 N O4



CM 2

CRN 971-21-1  
CMF C15 H22 N4 O3

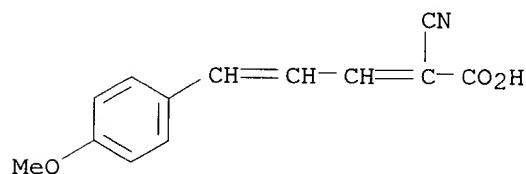
Absolute stereochemistry.



RN 126076-75-3 CAPLUS  
 CN 2,4-Pentadienoic acid, 2-cyano-5-(4-methoxyphenyl)-, compd. with  
 (S)-2-amino-1-butanol (1:1) (9CI) (CA INDEX NAME)

CM 1

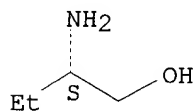
CRN 126057-96-3  
 CMF C13 H11 N O3



CM 2

CRN 5856-62-2  
 CMF C4 H11 N O

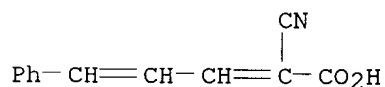
Absolute stereochemistry. Rotation (+).



L4 ANSWER 40 OF 70 CAPLUS COPYRIGHT 2002 ACS  
 ACCESSION NUMBER: 1989:193550 CAPLUS  
 DOCUMENT NUMBER: 110:193550  
 TITLE: Functionalization of siloxanes by esterification of  
 pendant epoxy groups: crosslinkable liquid polymers  
 containing photodimerizable ester units  
 AUTHOR(S): Hajaiej, Adel; Coqueret, Xavier; Lablache-Combier,  
 Alain; Loucheux, Claude  
 CORPORATE SOURCE: Lab. Chim. Org. Macromol., Univ. Sci. Tech. Lille,  
 Villeneuve d'Ascq, F-59655, Fr.  
 SOURCE: Makromolekulare Chemie (1989), 190(2), 327-40  
 CODEN: MACEAK; ISSN: 0025-116X



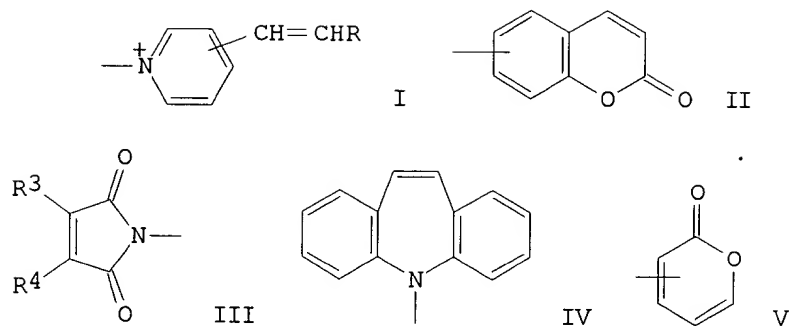
DOCUMENT TYPE: Journal  
LANGUAGE: English  
AB Photo-dimerizable carboxylic acids were bonded onto linear silicone copolymers by amine-catalyzed esterification of pendant epoxypropyl groups. Liq., photo-crosslinkable polymers were obtained after acetylation of the hydroxy-ester groups resulting from the addn. of functional carboxylic acids, and no unwanted side-reaction was detected. The practical sensitivity of photo-reactive polysiloxanes of various av. mol. wts. contg. 5-17 mol% of sensitive units, was measured by photoresist type insolubilization tests. The acetylation reaction had little or no influence on the dimerization process of 2-cyano-5-phenyl-2,4-pentadienoic derivs., but increased the rate of disappearance of trans-cinnamic groups submitted to UV light irradiation.  
IT **24139-57-9DP**, esters with epoxy-terminated siloxanes  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(prepn. and photocrosslinking of)  
RN 24139-57-9 CAPLUS  
CN 2,4-Pentadienoic acid, 2-cyano-5-phenyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



L4 ANSWER 41 OF 70 CAPLUS COPYRIGHT 2002 ACS  
ACCESSION NUMBER: 1987:25823 CAPLUS  
DOCUMENT NUMBER: 106:25823  
TITLE: Waterless lithographic plate blank  
INVENTOR(S): Ichijo, Tsutomu; Taniguchi, Masaharu; Mori, Yoichi  
PATENT ASSIGNEE(S): Toray Industries, Inc., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 61123847	A2	19860611	JP 1984-244383	19841121

GI



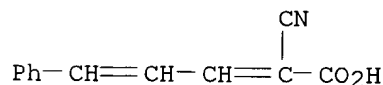
AB The claimed waterless lithog. plate blank plate is composed of (1) a support, (2) a photocuring type adhesive layer contg. monomer, oligomer or a polymer having .gtoreq.1 group selected from  $R(CH:CR_1)_nCH:CR_2CO$ , I,  $C_6H_4CH:CHR$ , II, III, IV, V, and 9-anthryl, where  $R = C_5-20$  aryl, heterocyclyl;  $R_1 = H$ ,  $C_1-10$  alkyl;  $R_2 = R_1$ , aryl, alkanoyl, CN;  $R_3 =$  aryl;  $R_4 = H$ , halo,  $C_1-10$  alkyl, CN), and (3) a layer made of a crosslinked silicone rubber prepd. by addn. reaction of a Si-H bond-contg. compd. with a C-C double bond-contg. compd. The silicone rubber should have  $C_2-110$  alkylene or alkenylene as the crosslinking group. Thus, an Al support was coated with a soln. of a ester of 1,3-bis(N,N-diglycidylaminomethyl)cyclohexane with .alpha.-cyano-.beta.-styrylacrylic acid, and coated with a compn. contg. .alpha.,.omega.-divinyldimethylsiloxane, trimethylsilyl-terminated Me siloxane and chloroplatinic acid to give a waterless lithog. plate blank. The blank was imagewise exposed and developed to give a high-quality waterless lithog. plate.

IT **24139-57-9**

RL: RCT (Reactant); RACT (Reactant or reagent)  
(esterification of, with bis(diglycidylaminomethyl)cyclohexane, photocurable adhesive from)

RN 24139-57-9 CAPLUS

CN 2,4-Pentadienoic acid, 2-cyano-5-phenyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



IT **63278-64-8**

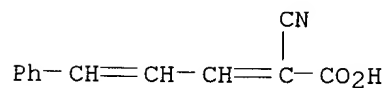
RL: USES (Uses)  
(photocurable adhesive contg., for photosensitive laminates for waterless lithog. plates)

RN 63278-64-8 CAPLUS

CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane, 2-cyano-5-phenyl-2,4-pentadienoate (9CI) (CA INDEX NAME)

CM 1

CRN 24139-57-9  
CMF C12 H9 N O2

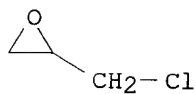


CM 2

CRN 25068-38-6  
CMF (C15 H16 O2 . C3 H5 Cl O)x  
CCI PMS

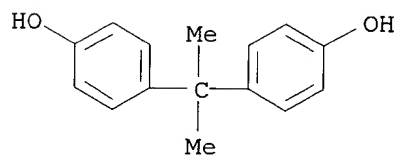
CM 3

CRN 106-89-8  
CMF C3 H5 Cl O



CM 4

CRN 80-05-7  
CMF C15 H16 O2



IT **106049-53-0**

RL: USES (Uses)

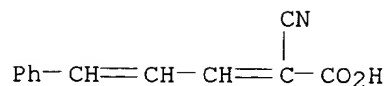
(photocurable adhesive, for photosensitive laminates for waterless lithog. plates)

RN 106049-53-0 CAPLUS

CN 2,4-Pentadienoic acid, 2-cyano-5-phenyl-, diester with 1,2,3-propanetriol (9CI) (CA INDEX NAME)

CM 1

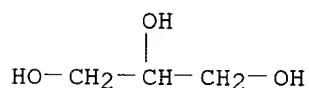
CRN 24139-57-9  
CMF C12 H9 N O2



CM 2

CRN 56-81-5

CMF C3 H8 O3



L4 ANSWER 42 OF 70 CAPLUS COPYRIGHT 2002 ACS  
 ACCESSION NUMBER: 1984:611908 CAPLUS  
 DOCUMENT NUMBER: 101:211908  
 TITLE: Polyesters sensitive to visual light  
 INVENTOR(S): Iwata, Kaoru; Hagiwara, Tsuneo; Matsuzawa, Hiroshi  
 PATENT ASSIGNEE(S): Teijin Ltd. , Japan  
 SOURCE: Ger. Offen., 49 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3320393	A1	19840823	DE 1983-3320393	19830606
JP 59155417	A2	19840904	JP 1983-27716	19830223
JP 03063741	B4	19911002		
US 4495343	A	19850122	US 1983-501395	19830606
DE 3348079	C2	19890629	DE 1983-3348079	19830606
			JP 1983-27716	19830223

PRIORITY APPLN. INFO.:  
 AB Polyesters curable by visible light contain .gtoreq.10 mol%  
 C6H4[CH:CHCH:C(CN)CO2H]2-based units and have reduced viscosity (RV)  
 .gtoreq.0.2 dL/g. Thus, stirring p-C6H4[CH:CHCH:C(CN)CO2Bu]2 43.2,  
 triethylene glycol 30.0, Ti(Obu)4 0.034, and hydroquinone 0.20 part for  
 40 min at 200.degree., 30 min at 200.degree./300 mm, 30 min at  
 200.degree./20 mm, and 55 min at 200.degree./0.1 mm gave a polyester (I) [93082-64-5]  
 with RV 0.92 dL/g. A soln. of I 50, 1:1:1:1 ethylene glycol-isophthalic  
 acid-neopentyl glycol-terephthalic acid copolymer [27923-68-8] (RV 0.69  
 dL/g) 50, and CH2Cl2 1000 parts was coated on Al, dried 10 min at  
 60.degree., and exposed to an Ar laser (0.1 W) for 2-500 ms, giving a  
 lithog. plate with abs. sensitivity .ltoreq.1.0 mJ/cm2.  
 IT **93196-71-5**  
 RL: USES (Uses)  
 (photocurable, by visible light)

RN 93196-71-5 CAPLUS

L4 ANSWER 43 OF 70 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1984:211003 CAPLUS

DOCUMENT NUMBER: 100:211003

TITLE: Preparation of self-sensitizing photopolymer

PATENT ASSIGNEE(S): Nishikubo, Tadatomi, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	JP 58164603	A2	19830929	JP 1982-46567	19820324

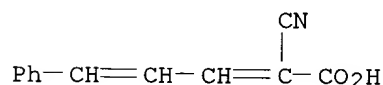
AB The title photopolymers are prepd. from a copolymer contg. both a haloalkyl group and a photosensitizer unit in the side chain and a compd. contg. a light-sensitive group which is reactive with the haloalkyl group.

The polymers have excellent properties with respect to photocuring, reproducibility, and prevention of pollution in the working environment. Thus, chloromethylstyrene 43.49, 2-methacryloyloxy-N-(4-nitro-1-naphthyl)acetamide 3.96, and AIBN 0.477 g were mixed to give 28.74 g copolymer (yield 50.03%). The copolymer 3.815, Bu4NBr 0.665, and K cinnamate 4.652 g were mixed to give 4.91 g photopolymer (I) (yield 78.3%). I coated on a Cu plate showed excellent light sensitivity.

IT **87133-49-1D**, reaction products with chloromethylstyrene polymers  
 RL: USES (Uses)  
 (photopolymers, self-sensitizing)

RN 87133-49-1 CAPLUS

CN 2,4-Pentadienoic acid, 2-cyano-5-phenyl-, potassium salt (9CI) (CA INDEX NAME)



● K

L4 ANSWER 44 OF 70 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1984:7596 CAPLUS

DOCUMENT NUMBER: 100:7596

TITLE: Study of photopolymers. 18. Synthesis and photochemical reaction of novel polymers with pendant photosensitive and photosensitizing groups

AUTHOR(S): Iizawa, Takashi; Nishikubo, Tadatomi; Takahashi, Eiiji; Hasegawa, Masaki

CORPORATE SOURCE: Fac. Eng., Kanagawa Univ., Yokohama, 221, Japan

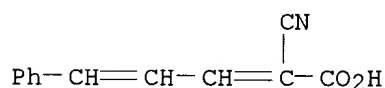
SOURCE: Makromolekulare Chemie (1983), 184(11), 2297-312

CODEN: MACEAK; ISSN: 0025-116X

DOCUMENT TYPE: Journal

LANGUAGE: English

- AB Self-sensitized photosensitive polymers with pendant photosensitive and photosensitizing groups were prepd. by reaction of polystyrene contg. pendant chloromethyl and photosensitizing groups, with the K salts of photosensitive compds. such as cinnamic acid, crotonic acid, or 2-cyano-3-(.alpha.-styryl)acrylic acid in DMF using Bu4NBr as phase transfer catalyst. The photochem. reactivity and the practical photosensitivity of the resulting polymers were measured by IR spectrometry and by the gray-scale method, resp. Pendant 4-nitro-1-naphthyloxy and 4-nitrophenoxy groups in the polymers showed the highest photosensitizing activity for pendant cinnamoyl groups. The photochem. reactivity and the sensitivity of these polymers are affected by the content of photosensitizing units in the polymer skeleton; the glass transition temp. of the polymers, however, is not influenced. Pendant 2-benzoylbenzoyl groups act as excellent photosensitizers for pendant crotonoyl groups, however, the photochem. reactivity of this polymer was lower than that of the polymer with pendant cinnamoyl and suitable photosensitizing groups. Pendant 2-cyano-3-(.alpha.-styryl)acryloyl groups in the polymer, which exhibit high photochem. activity, are also sensitized by pendant methyleosin moieties.
- IT **87133-49-1DP**, reaction products with polystyrene contg. chloromethyl and photosensitizer groups  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (prepn. and photochem. reaction of)
- RN 87133-49-1 CAPLUS
- CN 2,4-Pentadienoic acid, 2-cyano-5-phenyl-, potassium salt (9CI) (CA INDEX NAME)



● K

L4 ANSWER 45 OF 70 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1983:523029 CAPLUS

DOCUMENT NUMBER: 99:123029

TITLE: Studies of photopolymer. XX. Syntheses of photosensitive polymers with pendant photosensitive groups and photosensitizer groups

AUTHOR(S): Iizawa, Takashi; Nishikubo, Tadatomi; Uemura, Shoichi;

CORPORATE SOURCE: Kakuta, Kazuo; Takahashi, Eiji; Hasegawa, Masaki  
 Dep. Appl. Chem., Kanagawa Univ., Yokohama, 221, JapanSOURCE: Kobunshi Ronbunshu (1983), 40(7), 425-32  
 CODEN: KBRBA3; ISSN: 0386-2186

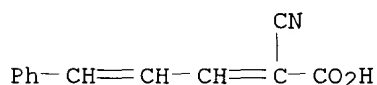
DOCUMENT TYPE: Journal  
LANGUAGE: Japanese

AB Polymers (I) with pendant photosensitizer groups and ClCH<sub>2</sub> groups were prepd. by radical copolymn. of photosensitizer group-contg. methacrylate esters CH<sub>2</sub>:CMeCO<sub>2</sub>R [R = CH<sub>2</sub>CONHC<sub>6</sub>H<sub>4</sub>NO<sub>2</sub>-p (A), 4-nitro-1-naphthylaminocarbonylmethyl (B), CH<sub>2</sub>CO<sub>2</sub>CHPhBz (C), and 2-CH<sub>2</sub>CO<sub>2</sub>C<sub>6</sub>H<sub>3</sub>(OMe)Bz-4,1 (D)] with (chloromethyl)styrene, and subsequent substitution reaction of I with photoreactive K carboxylates [PhCH:CHCO<sub>2</sub>K, PhCH:CHCH:C(CN)CO<sub>2</sub>K, MeCH:CHCO<sub>2</sub>K, BzCH:CHC<sub>6</sub>H<sub>4</sub>CO<sub>2</sub>K-p, and p-BzCH:CHC<sub>6</sub>H<sub>4</sub>CH:CHCO<sub>2</sub>K] and NaN<sub>3</sub> using phase-transfer catalyst in aprotic polar solvents gave the title polymers (II). The rates of the photochem. reactions of II were measured by IR spectrometry, and indicated that the pendant cinnamate ester is sensitized effectively by pendant groups such A, B, and C. The pendant crotonate ester is sensitized by pendant C and D moieties. Photodegrdn. rate of the pendant CH<sub>2</sub>N<sub>3</sub> group is promoted by the pendant photosensitizer groups.

IT **87133-49-1DP**, reaction products with photosensitizer group-contg. (chloromethyl)styrene-methacrylate ester copolymer  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(prepn. and photochem. reactions of)

RN 87133-49-1 CAPLUS

CN 2,4-Pentadienoic acid, 2-cyano-5-phenyl-, potassium salt (9CI) (CA INDEX NAME)



● K

L4 ANSWER 46 OF 70 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1982:226419 CAPLUS

DOCUMENT NUMBER: 96:226419

TITLE: Reversible photodimerization of some butadiene derivatives in solid state

AUTHOR(S): Swamy, H. Ramachandra; Ramamurthy, V.; Rao, C. N. R.

CORPORATE SOURCE: Dep. Org. Chem., Indian Inst. Sci., Bangalore, 560 012, India

SOURCE: Indian Journal of Chemistry, Section B: Organic Chemistry Including Medicinal Chemistry (1982), 21B(2), 79-82  
CODEN: IJSBDB; ISSN: 0376-4699

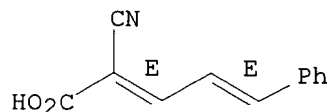
DOCUMENT TYPE: Journal

LANGUAGE: English

AB Photodimerization of a series of butadiene derivs. in the solid state was studied to explore the possible occurrence of reversible photochromism. The study underscored the importance of topochem. factors in solid state

org. reactions.  
 IT **81620-80-6**  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (photolysis of, in solid state)  
 RN 81620-80-6 CAPLUS  
 CN 2,4-Pentadienoic acid, 2-cyano-5-phenyl-, (E,E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



L4 ANSWER 47 OF 70 CAPLUS COPYRIGHT 2002 ACS  
 ACCESSION NUMBER: 1982:180289 CAPLUS  
 DOCUMENT NUMBER: 96:180289  
 TITLE: Structural effect in cross conjugative systems. IV. Properties of .alpha.-carboxyphenylpolyenic cyanides and the quantum chemical calculation of orbital

energy

and bond order

AUTHOR(S): Liang, Desheng; Lai, Chugen; Chiang, Mingchien  
 CORPORATE SOURCE: Inst. Chem., Acad. Sin., Shanghai, Peop. Rep. China  
 SOURCE: Fenzi Kexue Xuebao (1981-1982) (1981), 1(1), 17-30  
 CODEN: FXKUDX; ISSN: 0253-3677

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

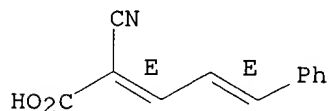
AB all-trans-Ph(CH:CH)nCH:C(CN)CO2H (I) are prepd. and their UV and mass spectra are obsd. The MO, .pi.-energy differences, and .pi.-bond orders of I are calcd. by CNDO/2. The properties of I are correctly calcd. by using the extended form of the homologous equation for the corresponding linear conjugated system (.omega.-phenylpolyenic nitriles) with an .alpha.-CO2H group substituent. Cross-conjugated systems may be

generally

treated by allowing 1 of the 2 branches to become the terminal group of a linear conjugated system while the other branch becomes the substituent.

IT **81620-80-6**  
 RL: PRP (Properties)  
 (bond order and UV of, MO calcn. of)  
 RN 81620-80-6 CAPLUS  
 CN 2,4-Pentadienoic acid, 2-cyano-5-phenyl-, (E,E)- (9CI) (CA INDEX NAME)

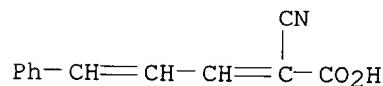
Double bond geometry as shown.



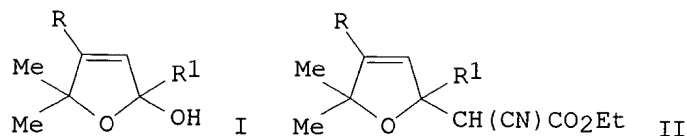
L4 ANSWER 48 OF 70 CAPLUS COPYRIGHT 2002 ACS  
 ACCESSION NUMBER: 1981:193072 CAPLUS



DOCUMENT NUMBER: 94:193072  
 TITLE: Photochemistry of polymeric systems. III.  
 Photocrosslinking of polymers and copolymers  
 including cyanocinnamylidene-pyridinium groups  
 AUTHOR(S): Roucoux, Colette; Loucheux, Claude; Lablache-Combier, Alain  
 CORPORATE SOURCE: Lab. Chim. Macromol., Univ. Sci. Tech. Lille, Villeneuve d'Ascq, F-59655, Fr.  
 SOURCE: Journal of Applied Polymer Science (1981), 26(4), 1221-32  
 CODEN: JAPNAB; ISSN: 0021-8995  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB Photocrosslinkable polymers were obtained by reacting 2-bromoethyl esters of cinnamic acid or cyanocinnamylideneacetic acid with pyridine units of a (co)polymer such as poly(4-vinylpyridine) or styrene-4-vinylpyridine copolymer. These photosensitive polymers were characterized by conventional anal. and spectrometry. Photocrosslinking was studied on thin films by measuring the threshold of insolubilization together with UV and IR spectra.  
 IT **24139-57-9**  
 RL: RCT (Reactant); RACT (Reactant or reagent) (esterification of, with bromoethanol)  
 RN 24139-57-9 CAPLUS  
 CN 2,4-Pentadienoic acid, 2-cyano-5-phenyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



L4 ANSWER 49 OF 70 CAPLUS COPYRIGHT 2002 ACS  
 ACCESSION NUMBER: 1978:508877 CAPLUS  
 DOCUMENT NUMBER: 89:108877  
 TITLE: Alkaline hydrolysis of products of the condensation of 2-hydroxy-2,5-dihydrofurans with cyanoacetic ester  
 AUTHOR(S): Orlova, A. N.; Efremov, D. A.  
 CORPORATE SOURCE: Leningr. Gos. Pedagog. Inst., Leningrad, USSR  
 SOURCE: Zhurnal Organicheskoi Khimii (1978), 14(6), 1302-5  
 CODEN: ZORKAE; ISSN: 0514-7492  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian  
 GI



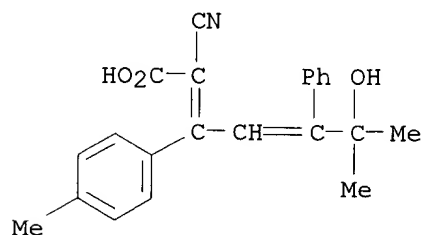
AB Condensation of I (R, R1 = Ph, p-tolyl) with NCCH<sub>2</sub>CO<sub>2</sub>Et gave II, which were hydrolyzed to Me<sub>2</sub>C(OH)CR:CHCR1:C(CN)CO<sub>2</sub>H. The formation and condensation of furylium perchlorates were also described.

IT **67295-13-0P**

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)

RN 67295-13-0 CAPLUS

CN 2,4-Heptadienoic acid, 2-cyano-6-hydroxy-6-methyl-3-(4-methylphenyl)-5-phenyl- (9CI) (CA INDEX NAME)



L4 ANSWER 50 OF 70 CAPLUS COPYRIGHT 2002 ACS  
 ACCESSION NUMBER: 1978:97440 CAPLUS  
 DOCUMENT NUMBER: 88:97440  
 TITLE: Photopolymerizable materials for printing plates  
 INVENTOR(S): Gates, Allen Peter; Hinch, Stephen Charles; Withers, Christopher Vaughan  
 PATENT ASSIGNEE(S): Vickers Ltd., UK  
 SOURCE: Ger. Offen., 34 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2658272	A1	19770714	DE 1976-2658272	19761222
GB 1572441	A	19800730	GB 1975-52522	19751223
SE 7614315	A	19770624	SE 1976-14315	19761220
SE 424642	B	19820802		
SE 424642	C	19821111		
BR 7608579	A	19771227	BR 1976-8579	19761221
PL 103094	P	19790531	PL 1976-194590	19761221
CA 1107444	A1	19810818	CA 1976-268315	19761221
NO 7604338	A	19770624	NO 1976-4338	19761222
FI 7603683	A	19770624	FI 1976-3683	19761222

FI 64863	B	19830930		
FI 64863	C	19840110		
DK 7605799	A	19770624	DK 1976-5799	19761222
NL 7614259	A	19770627	NL 1976-14259	19761222
FR 2336707	A1	19770722	FR 1976-38665	19761222
FR 2336707	B1	19830429		
AU 7620818	A1	19780629	AU 1976-20818	19761222
AU 510145	B2	19800612		
CH 629314	A	19820415	CH 1976-16199	19761222
BE 849803	A1	19770623	BE 1976-173590	19761223
JP 52086488	A2	19770718	JP 1976-154335	19761223
ZA 7607635	A	19771130	ZA 1976-7635	19761223
ES 454521	A1	19771201	ES 1976-454521	19761223
AT 7609640	A	19780715	AT 1976-9640	19761223
AT 348552	B	19790226		
CS 212783	P	19820326	CS 1976-8572	19761223
US 4263394	A	19810421	US 1979-49272	19790618
PRIORITY APPLN. INFO.:			GB 1975-52522	19751223
			US 1976-753281	19761222

AB Reaction products of glycidyl acrylate polymers and cinnamylidenemalonic acids are useful as photopolymerizable materials which, in their uncured form, are sol. in aq. solns. of inorg. salts. These materials are esp. useful in prepg. printing plates. Thus, poly(2,3-epoxypropyl methacrylate) 5 g was dissolved in 2-butanone 100 mL and then mixed with cinnamylidenemalonic acid 9.17 and benzyltriethylammonium chloride 0.4 g. The mixt. was then heated 5 h at 80.degree., cooled, pptd. in water 2 L, and filtered off. This polymer 2 g was then dissolved in 2-butanone 100 mL, coated on a grained and anodically oxidized Al support, dried 2 min

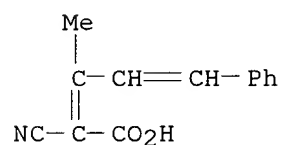
at 80.degree., exposed to a 4000-W Xe lamp through a neg., and developed in

a 5.7% aq. Na metasilicate soln. to give a printing plate capable of giving many tech. satisfactory prints.

IT **54681-21-9**  
RL: USES (Uses)  
(dto)

RN 54681-21-9 CAPLUS

CN 2,4-Pentadienoic acid, 2-cyano-3-methyl-5-phenyl- (7CI, 9CI) (CA INDEX NAME)



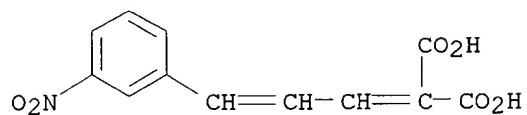
IT **65547-19-5**  
RL: TEM (Technical or engineered material use); USES (Uses)  
(photopolymerizable compns. contg., for printing plates)

RN 65547-19-5 CAPLUS

CN 2-Propenoic acid, 2-methyl-, oxiranylmethyl ester, homopolymer, 2-cyano-5-phenyl-2,4-pentadienoate [3-(3-nitrophenyl)-2-propenylidenel]propanedioate (9CI) (CA INDEX NAME)

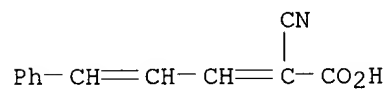
CM 1

CRN 95207-71-9  
CMF C12 H9 N O6



CM 2

CRN 24139-57-9  
CMF C12 H9 N O2

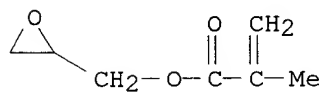


CM 3

CRN 25067-05-4  
CMF (C7 H10 O3) x  
CCI PMS

CM 4

CRN 106-91-2  
CMF C7 H10 O3

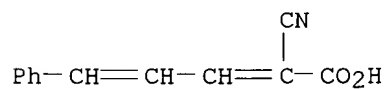


IT **24139-57-9P**

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)

RN 24139-57-9 CAPLUS

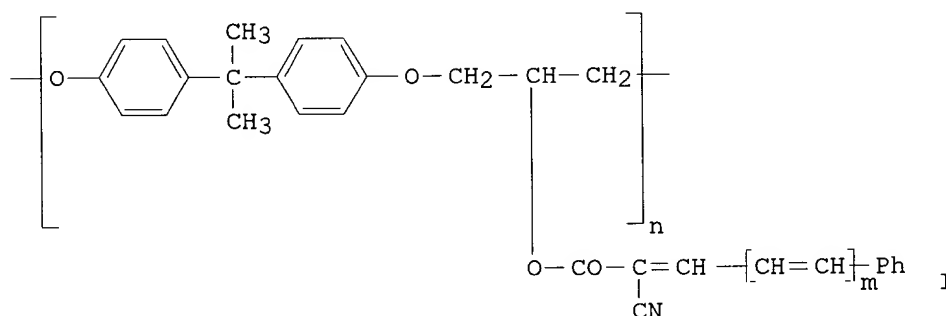
CN 2,4-Pentadienoic acid, 2-cyano-5-phenyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



L4 ANSWER 51 OF 70 CAPLUS COPYRIGHT 2002 ACS  
 ACCESSION NUMBER: 1978:14340 CAPLUS  
 DOCUMENT NUMBER: 88:14340  
 TITLE: Photopolymer printing plates  
 INVENTOR(S): Ohta, Takatoshi  
 PATENT ASSIGNEE(S): Okamoto Chemical Industry Co., Ltd., Japan  
 SOURCE: Fr. Demande, 7 pp.  
 CODEN: FRXXBL  
 DOCUMENT TYPE: Patent  
 LANGUAGE: French  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2297437	A1	19760806	FR 1975-502	19750109

GI



AB Polymeric compns. I ( $n \geq 50$ ;  $m = 0$  or  $1$ ), which are epichlorohydrin-Bisphenol A condensates of mol. wt. between 5000 and 50,000, whose OH groups are esterified to >70% with .alpha.-cyanocinnamylideneacetic or .alpha.-cyanocinnamic acid, are superior in sensitivity, ink-receptivity, and abrasion-resistance to the phenoxy cinnamate polymers without the CN group (CA 69: 44438c). Thus, Bakelite PKHA (Union Carbide; mol. wt. .apprx.10,000) was treated at 0.degree.

with an equal wt. of .alpha.-cyanocinnamylideneacetyl chloride in PhMe-pyridine. A soln. of the obtained polymer 1 g with Michler's ketone 100 mg and crystal violet 50 mg in a mixt. of PhCl 30 and dioxane 20 mL was coated on a brushed Al plate, exposed to a C arc lamp, and developed by light rubbing with a cotton wad impregnated with ClCH1:CCl2. The plate

yielded .apprx.100,000 prints of good quality.

IT 63278-64-8 64772-37-8

RL: USES (Uses)

(photopolymer compn. contg., for printing plate prepn.)

RN 63278-64-8 CAPLUS

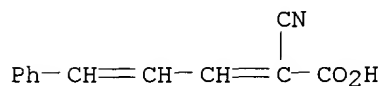
CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane,

2-cyano-5-phenyl-2,4-pentadienoate (9CI) (CA INDEX NAME)

CM 1

CRN 24139-57-9

CMF C12 H9 N O2



CM 2

CRN 25068-38-6

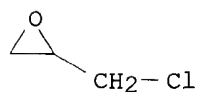
CMF (C15 H16 O2 . C3 H5 Cl O)x

CCI PMS

CM 3

CRN 106-89-8

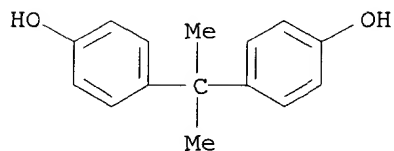
CMF C3 H5 Cl O



CM 4

CRN 80-05-7

CMF C15 H16 O2



RN 64772-37-8 CAPLUS

L4 ANSWER 52 OF 70 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1977:584347 CAPLUS

DOCUMENT NUMBER: 87:184347

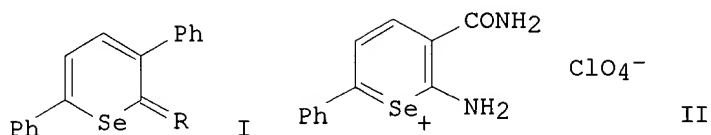
TITLE: A one step route to new selenopyrone or selenopyrylium

derivatives from .beta.-chloropropenylideneimmonium salts and selenium nucleophiles

AUTHOR(S): Liebscher, J.; Hartmann, H.

CORPORATE SOURCE: Sek. Chem., Tech. Univ., Dresden, E. Ger.

SOURCE: Tetrahedron (1977), 33(7), 731-4  
 CODEN: TETRAB  
 DOCUMENT TYPE: Journal  
 LANGUAGE: German  
 GI



AB Cyclocondensation reaction of .beta.-aminovinylseleno ketones with arylacetic acid chlorides, N-iminoformylarylacetic imidochlorides, and cyanoacetic acid derivs. gave 6-aryl-2-selenopyrones, 6-aryl-2-(N-formamido)selenopyrylium salts, and 6-aryl-2-aminoselenopyrylium salts, resp. E.g.,  $\text{PhCSeCH:CHNR}_2$  ( $\text{NR}_2 = \text{piperidino}$ ) with  $\text{PhCH}_2\text{COCl}$ ,  $\text{PhCH}_2\text{CCl:NCH:N+Me}_2 \text{ClO}_4^-$ , and  $\text{NCCH}_2\text{CONH}$  gave 46% I ( $\text{R} = \text{O}$ ), 61% I ( $\text{R} = \text{NCH:N+Me}_2 \text{ClO}_4^-$ ), and 12% II, resp. 6-Aryl-2-aminoselenopyrylium salts were also prepd. by cyclocondensation of 3-(.beta.-chlorovinyl)acrylonitriles with  $\text{NaHSe}$ . E.g.,  $\text{PhCCl:CHCH:C(CN)CONH}_2$  with  $\text{NaHSe}$  gave 28% II.

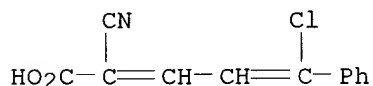
IT **64306-22-5**

RL: RCT (Reactant)

(cyclocondensation reaction of, with sodium hydrogen selenide)

RN 64306-22-5 CAPLUS

CN 2,4-Pentadienoic acid, 5-chloro-2-cyano-5-phenyl- (9CI) (CA INDEX NAME)



L4 ANSWER 53 OF 70 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1977:468833 CAPLUS

DOCUMENT NUMBER: 87:68833

TITLE: A study on phenoxy-resin esters of cinnamylideneacetic

acid and its derivatives

AUTHOR(S): Yamaoka, Tsuguo; Ueno, Koji; Tsunoda, Takahiro; Torige, Kazuo

CORPORATE SOURCE: Fac. Eng., Chiba Univ., Chiba, Japan

SOURCE: Polymer (1977), 18(1), 81-6  
 CODEN: POLMAG; ISSN: 0032-3861

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Treatment of Epicoat PKHH 30,000 [25068-38-6] with cinnamylideneacetyl chloride [40926-86-1], .alpha.-cyanocinnamylideneacetyl chloride [25519-47-5], and cinnamylidenepyruvyl chloride [63257-27-2] resulted in 63-78% esterification of the polymer giving 3 photocrosslinkable resins of

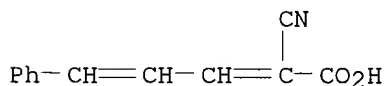
which Epicoat PKHH 30,000 cinnamylidenepyruvate (I) [58858-02-9] had the highest photosensitivity. The spectral sensitivity of I extended to 500 nm without the aid of a photosensitizing dye. Pyrilium and thiopyrilium perchlorates spectrally sensitized all 3 resin esters, the effects of alkoxy-substituted sensitizers, e.g. 2,4,6-trianisylpyrilium perchlorate [63373-56-8], being greater than those of sensitizers contg. no alkoxy groups, e.g. 2,4,6-triphenylpyrilium perchlorate [1484-88-4]. The spectral sensitivities of the polymers were shifted to longer wavelengths by such sensitizers contg. p-alkoxy groups. The photocrosslinking kinetics were examd.

IT **24139-57-9**

RL: RCT (Reactant); RACT (Reactant or reagent)  
(chlorination of)

RN 24139-57-9 CAPLUS

CN 2,4-Pentadienoic acid, 2-cyano-5-phenyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



IT **63278-64-8P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(prepn. and photocrosslinking of)

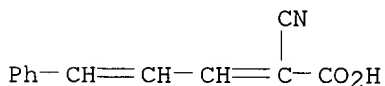
RN 63278-64-8 CAPLUS

CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with  
(chloromethyl)oxirane,  
2-cyano-5-phenyl-2,4-pentadienoate (9CI) (CA INDEX NAME)

CM 1

CRN 24139-57-9

CMF C12 H9 N O2



CM 2

CRN 25068-38-6

CMF (C15 H16 O2 . C3 H5 Cl O)x

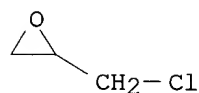
CCI PMS

CM 3

CRN 106-89-8

CMF C3 H5 Cl O

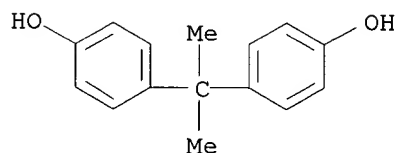




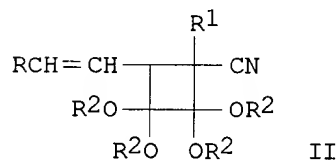
CM 4

CRN 80-05-7

CMF C15 H16 O2

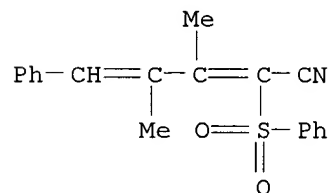


L4 ANSWER 54 OF 70 CAPLUS COPYRIGHT 2002 ACS  
 ACCESSION NUMBER: 1976:592202 CAPLUS  
 DOCUMENT NUMBER: 85:192202  
 TITLE: Chemistry of tetra-alkoxyethenes. Part VII. Thermal  
 [2 + 2] cycloadditions with 1-cyanobutadienes  
 AUTHOR(S): Ooms, Pieter H. J.; Bertisen, Mat A.; Scheeren, Hans  
 W.; Nivard, Rutger J. F.  
 CORPORATE SOURCE: Dep. Org. Chem., Cathol. Univ., Nijmegen, Neth.  
 SOURCE: J. Chem. Soc., Perkin Trans. 1 (1976), (14), 1538-43  
 CODEN: JCPRB4  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 GI

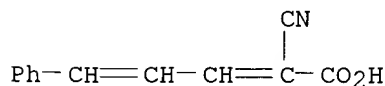


AB RCH:CHCH:CR1CN (I; R = Me, iso-Pr, 4-O2NC6H4, 4-ClC6H4, 4-MeC6H4,  
 4-MeOC6H4, Ph, 2-furyl, R1 = CN; R = Ph, R1 = SO2Ph, CONH2, CO2Et, CPh),  
 prepd. by literature methods or Knoevenagel condensation of RCH:CHCHO  
 with  
 CH2R1CN, underwent [2 + 2] and not [4 + 2] cycloaddn. with  
 (R2O)2C:C(OR2)2  
 (R2 = Me, Et) to give 50-95% cycloadducts II. A comparison of the  
 reactivity of the butadienes I with that of electron poor olefins towards  
 the nucleophilic tetraalkoxyethenes is exemplified by the similarity of  
 substituent effects on the cycloaddns., for which a possible explanation

is given.  
 IT **60983-35-9P**  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. and cycloaddn. reaction with tetraalkoxyethenes)  
 RN 60983-35-9 CAPLUS  
 CN 2,4-Pentadienenitrile, 3,4-dimethyl-5-phenyl-2-(phenylsulfonyl)- (9CI)  
 (CA INDEX NAME)



L4 ANSWER 55 OF 70 CAPLUS COPYRIGHT 2002 ACS  
 ACCESSION NUMBER: 1976:458179 CAPLUS  
 DOCUMENT NUMBER: 85:58179  
 TITLE: The mechanism of the inhibition of the mitochondrial  
 pyruvate transporter by .alpha.-cyanocinnamate  
 derivatives  
 AUTHOR(S): Halestrap, Andrew P.  
 CORPORATE SOURCE: Dep. Biochem., Univ. Bristol, Bristol, Engl.  
 SOURCE: Biochem. J. (1976), 156(1), 181-3  
 CODEN: BIJOAK  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB .alpha.-Cyano-4-hydroxycinnamate (I) (0.1mM) totally, rapidly, and  
 reversibly inhibited mitochondrial pyruvate transport at 6 and  
 22.degree..  
 I reacted reversibly with mercaptoethanol and cysteine to form addn.  
 products, suggesting that I reacts with an essential thiol group on the  
 pyruvate carrier.  
 IT **24139-57-9**  
 RL: BIOL (Biological study)  
 (transport of pyruvate by mitochondria inhibition by)  
 RN 24139-57-9 CAPLUS  
 CN 2,4-Pentadienoic acid, 2-cyano-5-phenyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX  
 NAME)



L4 ANSWER 56 OF 70 CAPLUS COPYRIGHT 2002 ACS  
 ACCESSION NUMBER: 1976:143069 CAPLUS  
 DOCUMENT NUMBER: 84:143069  
 TITLE: Photosensitive epoxy resin for printing plate  
 INVENTOR(S): Ueno, Koji; Tsunoda, Takahiro

PATENT ASSIGNEE(S): Ueno Chemical Industries, Ltd., Japan  
SOURCE: Japan. Kokai, 7 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	---	-----	-----	-----
GI	JP 50116022	A2	19750911	JP 1974-22217	19740225

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB A photosensitive compn. prepd. from an epoxy .alpha.-cyanocinnamylideneacetate resin (I) or an epoxy cinnamylidenepyruvate resin (II) exhibits an excellent photosensitivity even at long wavelengths, and also exhibits good adhesive properties towards metal supports; hence it is useful for prepg. highly sensitive presensitized printing plates. Optionally, a pyrylium-type sensitizer may be added to the photosensitive compn. Thus an epoxy resin (mol. wt. .apprx.30,000) was dissolved in dioxane, then a catalytic amt. of pyridine and PhCH:CHCH:C(CN)COCl (in excess with respect to OH groups of the resin) were added to the soln., and the mixt. was heated at 45-50.degree. for 4 hr to give a photosensitive resin I which was sensitive in the region of .apprx.300-450 nm. The addn. of 2,4,6-trianisylthiapyrylium perchlorate extended the photosensitivity of the resin to .ltoreq.590 nm.

IT **58858-03-0**

RL: USES (Uses)

(photosensitive compns. contg., for presensitized printing plates)

RN 58858-03-0 CAPLUS

L4 ANSWER 57 OF 70 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1975:454719 CAPLUS

DOCUMENT NUMBER: 83:54719

TITLE: Mitochondrial pyruvate carrier. Kinetics and specificity for substrates and inhibitors

AUTHOR(S): Halestrap, Andrew P.

CORPORATE SOURCE: Med. Sch., Univ. Bristol, Bristol, Engl.

SOURCE: Biochem. J. (1975), 148(1), 85-96

CODEN: BIJOAK

DOCUMENT TYPE: Journal

LANGUAGE: English

AB At 6.degree. the Km for pyruvate (I) transport by rat liver mitochondria was 0.15mM and Vmax. was 0.54 nmoles/min/mg protein; .alpha.-cyano-4-hydroxycinnamate (II) was a noncompetitive inhibitor, Ki 6.3.mu.M, and phenylpyruvate was competitive, Ki 1.8mM. At 100.mu.M II rapidly and almost totally inhibited O uptake by rat heart mitochondria oxidizing I. Inhibition by II analogs showed the .alpha.-cyanopropenoate group and hydrophobic arom. side chain to be important structural features. Oxamate, 2-oxobutyrate, phenylpyruvate, 2-oxo-4-methylpentanoate, chloroacetate, dichloroacetate, difluoroacetate, 2-chloropropionate,

3-chloropropionate, and 2,2-dichloropropionate all exchanged with I whereas acetate, lactate, and trichloroacetate did not. I transport was accompanied by H<sup>+</sup> flux (or exchange with OH<sup>-</sup>), which was also inhibited by

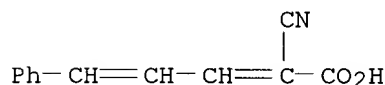
II. At 37.degree. the rate of I transport was 42 nmole/min/mg protein. The possible rate-limiting role of I transport in gluconeogenesis was discussed. The transport of monocarboxylic acids into mitochondria was studied by monitoring H<sup>+</sup> influx.

IT **24139-57-9**

RL: BIOL (Biological study)  
(pyruvate transport by mitochondria inhibition by)

RN 24139-57-9 CAPLUS

CN 2,4-Pentadienoic acid, 2-cyano-5-phenyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



L4 ANSWER 58 OF 70 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1975:156187 CAPLUS

DOCUMENT NUMBER: 82:156187

TITLE: Preparation of 3-substituted  
5-amino-1,2,4-oxadiazoles

from amidoximes with cyanogen bromide

AUTHOR(S): Dost, Johannes; Leisner, Rudi

CORPORATE SOURCE: Sek. Chem./Biol., Paedagog. Hochsch. "Wolfgang  
Ratke", Koethen, E. Ger.

SOURCE: Z. Chem. (1975), 15(2), 57

CODEN: ZECEAL

DOCUMENT TYPE: Journal

LANGUAGE: German

GI For diagram(s), see printed CA Issue.

AB Oxadiazoles I (R = Me, Ph, PhCH<sub>2</sub>, PhCH:CH, Ph(CH:CH)<sub>2</sub>, Me<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>CH:CH,  
HO<sub>2</sub>CCH<sub>2</sub>, PhCH:CHCH:C(CO<sub>2</sub>R<sub>1</sub>), MeOC<sub>6</sub>H<sub>4</sub>CH:C(CO<sub>2</sub>R<sub>1</sub>), Me<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>CH:C(CO<sub>2</sub>R<sub>1</sub>), R<sub>1</sub>  
=

H, R) were prepd. in 60-5% yield by treating RC(:NOH)NH<sub>2</sub> with BrCN.

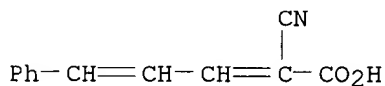
RC(:NOH)NH<sub>2</sub> were prepd. from RCN and NH<sub>2</sub>OH.

IT **24139-57-9**

RL: RCT (Reactant)  
(reaction of, with hydroxylamine)

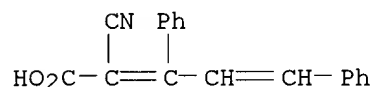
RN 24139-57-9 CAPLUS

CN 2,4-Pentadienoic acid, 2-cyano-5-phenyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

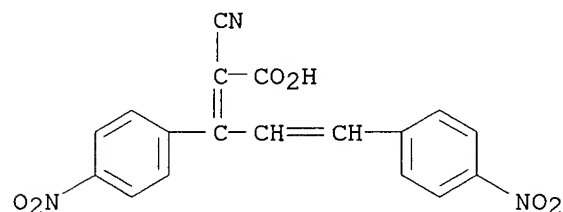


L4 ANSWER 59 OF 70 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1975:86169 CAPLUS  
 DOCUMENT NUMBER: 82:86169  
 TITLE: Synthesis of gem-diactivated dienes by a condensation related to the Stobbe reaction  
 AUTHOR(S): Martelli, J.; Danion, D.; Carrie, R.  
 CORPORATE SOURCE: Group Rech. Physiochim. Struct., Univ. Rennes, Rennes,  
 SOURCE: Fr.  
 Tetrahedron (1974), 30(17), 3063-71  
 CODEN: TETRAB  
 DOCUMENT TYPE: Journal  
 LANGUAGE: French  
 GI For diagram(s), see printed CA Issue.  
 AB Condensation of  $\text{RCH}_2\text{CR}_1:\text{C}(\text{CN})\text{CO}_2\text{R}_2$  I ( $\text{R} = \text{H}, \text{Me}, \text{Ph}$ ;  $\text{R}_1 = \text{alkyl}, \text{Ph}$ , substituted  $\text{Ph}$ ;  $\text{R}_2 = \text{Me}, \text{Et}$ ) with  $\text{R}_3\text{R}_4\text{CO}$  ( $\text{R}_3 = \text{H}$ ;  $\text{R}_4 = \text{alkyl}, \text{aryl}$ , styryl;  $\text{R}_3 = \text{R}_4 = \text{alkyl}$ ) using 1 equiv. of base gave the gem-diactivated alkenes  $\text{R}_3\text{CR}_4:\text{C}(\text{CN})\text{CO}_2\text{H}$  ( $\text{R}_3 = \text{R}_4 = \text{H}$ ) or the lactones II. Me esters of I were photochem. isomerized and the configurations of the products detd. by NMR.  
 IT **54561-76-1P 54680-90-9P 54680-96-5P**  
**54680-98-7P 54681-21-9P 54681-22-0P**  
**54681-23-1P 54681-27-5P 54681-28-6P**  
**54681-29-7P 54681-30-0P 54681-31-1P**  
**54681-32-2P 54681-49-1P**  
 RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. of)  
 RN 54561-76-1 CAPLUS  
 CN 2,4-Pentadienoic acid, 2-cyano-3,5-diphenyl- (9CI) (CA INDEX NAME)



RN 54680-90-9 CAPLUS  
 CN 2,4-Pentadienoic acid, 2-cyano-3,5-bis(4-nitrophenyl)- (9CI) (CA INDEX NAME)



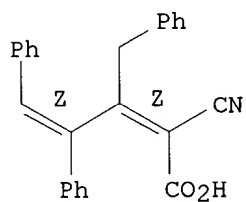
RN 54680-96-5 CAPLUS  
 CN 2,4-Pentadienoic acid, 2-cyano-4,5-diphenyl-3-(phenylmethyl)-, (Z,Z)-, compd. with piperidine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 54680-95-4

CMF C25 H19 N O2

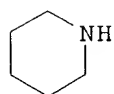
Double bond geometry as shown.



CM 2

CRN 110-89-4

CMF C5 H11 N



RN 54680-98-7 CAPLUS

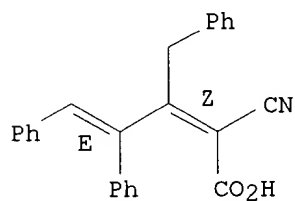
CN 2,4-Pentadienoic acid, 2-cyano-4,5-diphenyl-3-(phenylmethyl)-, (Z,E)-, compd. with piperidine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 54680-97-6

CMF C25 H19 N O2

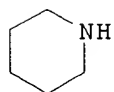
Double bond geometry as shown.



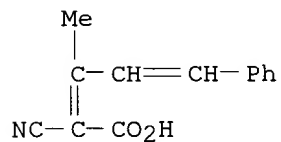
CM 2

CRN 110-89-4

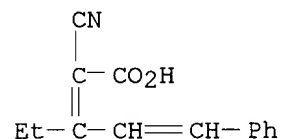
CMF C5 H11 N



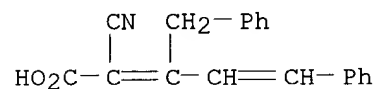
RN 54681-21-9 CAPLUS  
 CN 2,4-Pentadienoic acid, 2-cyano-3-methyl-5-phenyl- (7CI, 9CI) (CA INDEX NAME)



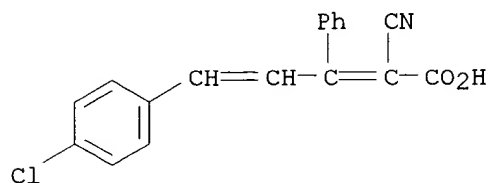
RN 54681-22-0 CAPLUS  
 CN 2,4-Pentadienoic acid, 2-cyano-3-ethyl-5-phenyl- (9CI) (CA INDEX NAME)



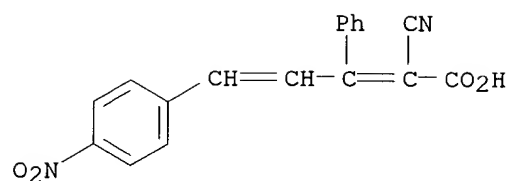
RN 54681-23-1 CAPLUS  
 CN 2,4-Pentadienoic acid, 2-cyano-5-phenyl-3-(phenylmethyl)- (9CI) (CA INDEX NAME)



RN 54681-27-5 CAPLUS  
 CN 2,4-Pentadienoic acid, 5-(4-chlorophenyl)-2-cyano-3-phenyl- (9CI) (CA INDEX NAME)

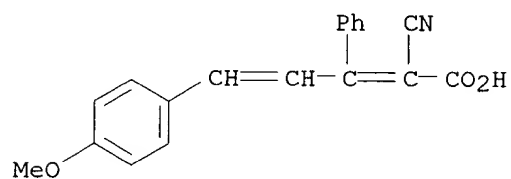


RN 54681-28-6 CAPLUS  
 CN 2,4-Pentadienoic acid, 2-cyano-5-(4-nitrophenyl)-3-phenyl- (9CI) (CA INDEX NAME)



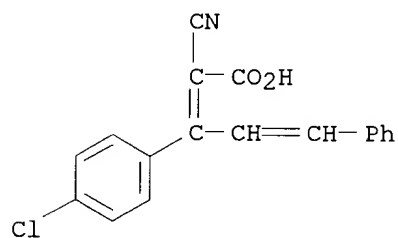
RN 54681-29-7 CAPLUS

CN 2,4-Pentadienoic acid, 2-cyano-5-(4-methoxyphenyl)-3-phenyl- (9CI) (CA INDEX NAME)



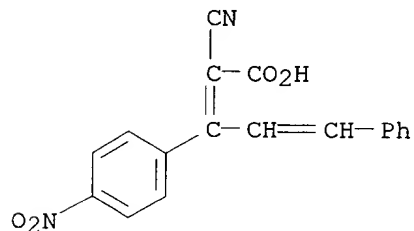
RN 54681-30-0 CAPLUS

CN 2,4-Pentadienoic acid, 3-(4-chlorophenyl)-2-cyano-5-phenyl- (9CI) (CA INDEX NAME)



RN 54681-31-1 CAPLUS

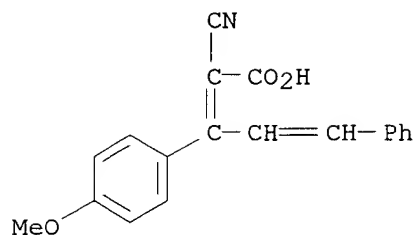
CN 2,4-Pentadienoic acid, 2-cyano-3-(4-nitrophenyl)-5-phenyl- (9CI) (CA INDEX NAME)



RN 54681-32-2 CAPLUS

CN 2,4-Pentadienoic acid, 2-cyano-3-(4-methoxyphenyl)-5-phenyl- (9CI) (CA INDEX NAME)





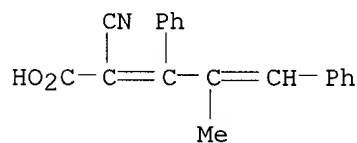
RN 54681-49-1 CAPLUS

CN 2,4-Pentadienoic acid, 2-cyano-4-methyl-3,5-diphenyl-, (Z)-, compd. with piperidine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 54681-48-0

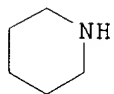
CMF C19 H15 N O2



CM 2

CRN 110-89-4

CMF C5 H11 N



L4 ANSWER 60 OF 70 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1975:72513 CAPLUS

DOCUMENT NUMBER: 82:72513

TITLE: Novel method of demethoxycarbonylation

AUTHOR(S): Texier, F.; Marchand, E.; Carrie, R.

CORPORATE SOURCE: Dep. Chem., Univ. Oran, Oran, Algeria

SOURCE: Tetrahedron (1974), 30(17), 3185-92

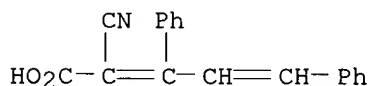
CODEN: TETRAB

DOCUMENT TYPE: Journal

LANGUAGE: French

AB On treatment with piperidine in boiling PhMe for 48 hr,  $\text{RCH}(\text{CO}_2\text{R}_1)_2$  (I, R = H,  $\text{PhCH}_2$ ,  $\text{R}_1$  = Me) and  $\text{RCH}(\text{CN})\text{CO}_2\text{R}_1$  (R = H,  $\text{Ph}_2\text{CH}$ ,  $\text{R}_1$  = Me, Et) underwent 10-100% loss of  $\text{CO}_2\text{R}_1$  to give  $\text{RCH}_2\text{CO}_2\text{R}_1$  and  $\text{RCH}_2\text{CN}$ , resp. Piperidinyl amides were also obtained. Similar treatment of  $\text{Ph}_2\text{C}:\text{C}(\text{CN})\text{CO}_2\text{Me}$  for 96 hr gave  $\text{Ph}_2\text{C}:\text{CHCN}$  quant. Substituted malonic and cyanoacetic acids were decarboxylated by this method.

IT **54561-76-1**  
 RL: RCT (Reactant)  
 (decarboxylation of, by piperidine)  
 RN 54561-76-1 CAPLUS  
 CN 2,4-Pentadienoic acid, 2-cyano-3,5-diphenyl- (9CI) (CA INDEX NAME)



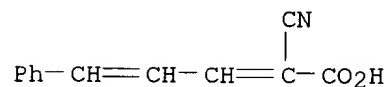
L4 ANSWER 61 OF 70 CAPLUS COPYRIGHT 2002 ACS  
 ACCESSION NUMBER: 1974:4218 CAPLUS  
 DOCUMENT NUMBER: 80:4218  
 TITLE: Acrylic acid polyesters  
 INVENTOR(S): Nishikubo, Tadatomi; Imamura, Yoshinori; Ina, Tsutomu;  
 Takaoka, Tsuneo  
 PATENT ASSIGNEE(S): Nippon Oil Seal Industry Co., Ltd.  
 SOURCE: Ger. Offen., 32 pp. Division of Ger. Offen. 2,060,873 (CA 75;89129t).  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 3  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2065417	A1	19730705	DE 1970-2065417	19701210
DE 2065417	B2	19750410		
DE 2065417	C3	19790705		
GB 1339884	A	19731205	GB 1973-23589	19701210
PRIORITY APPLN. INFO.:			JP 1969-98652	19691210

AB Acrylic polymers with unsatd. sidechains were manufd. by treating polymers of hydroxyalkyl acrylates with aryl-substituted unsatd. acid halides or arenecarboxylic halides. Thus, 7.5 g poly(2-hydroxyethyl acrylate) was heated 5 hr at 50.deg. with 12.9 g cinnamoyl chloride in hexamethylphosphoramide, giving 9.0 g poly(2-hydroxyethyl acrylate) cinnamate (I) [39448-84-5]. A 1 .mu. coating of I on a glass plate was uv irradiated through a stepped photometric absorption wedge, giving images which could be differentiated through the third stage.

IT **39465-24-2P**  
 RL: PREP (Preparation)  
 (manuf. of photo crosslinkable)  
 RN 39465-24-2 CAPLUS  
 CN 2-Propenoic acid, 2-hydroxyethyl ester, homopolymer, 2-cyano-5-phenyl-2,4-pentadienoate (9CI) (CA INDEX NAME)

CRN 24139-57-9  
CMF C12 H9 N O2

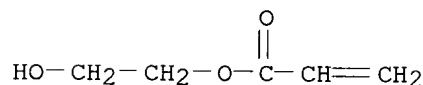


CM 2

CRN 26022-14-0  
CMF (C5 H8 O3)x  
CCI PMS

CM 3

CRN 818-61-1  
CMF C5 H8 O3



L4 ANSWER 62 OF 70 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1973:453143 CAPLUS

DOCUMENT NUMBER: 79:53143

TITLE: Synthesis of substituted 2H-thiopyran-2-ones

AUTHOR(S): Weissenfels, Manfred; Illing, Siegfried

CORPORATE SOURCE: Sek. Chem., Karl-Marx-Univ., Leipzig, E. Ger.

SOURCE: Z. Chem. (1973), 13(4), 130

CODEN: ZECEAL

DOCUMENT TYPE: Journal

LANGUAGE: German

GI For diagram(s), see printed CA Issue.

AB Knoevenagel reaction of HSCPh:CPhCHO with CH<sub>2</sub>(CN)<sub>2</sub> gave 44% title compd. (I, R = CN, R<sub>1</sub> = Ph). This was also obtained in 62% yield from treating ClCPh:CPhCHO with CH<sub>2</sub>(CN)<sub>2</sub> via 95% ClCR<sub>2</sub>:CR<sub>1</sub>CH:CR<sub>1</sub>CN (II, R = CN, R<sub>1</sub> = R<sub>2</sub>

= Ph) intermediate by reaction with Na<sub>2</sub>S, HCl, and H<sub>2</sub>O. Similarly, 7 other II [R = CO<sub>2</sub>Et, CN, CPh, CONH<sub>2</sub>; R<sub>1</sub> = Ph, H; R<sub>2</sub> = Ph, or R<sub>1</sub>R<sub>2</sub> = (CH<sub>2</sub>)<sub>4</sub>] were isolated in 70-95% yield, but only in the case of II (R = CO<sub>2</sub>Et, R<sub>1</sub>

= H, R<sub>2</sub> = Ph), a further postulated intermediate MeSCPh:CHCH:C(CN)CO<sub>2</sub>H was isolated. Similarly prep. were 42% I (R = H, R<sub>1</sub> = Ph) and 46% I (R =

CN, R<sub>1</sub> = H).

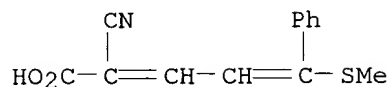
IT 41877-87-6P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)

RN 41877-87-6 CAPLUS

CN 2,4-Pentadienoic acid, 2-cyano-5-(methylthio)-5-phenyl- (9CI) (CA INDEX

NAME)



L4 ANSWER 63 OF 70 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1973:59304 CAPLUS

DOCUMENT NUMBER: 78:59304

TITLE: Photosensitive poly(vinyl esters)

INVENTOR(S): Takaoka, Tsuneo; Nishikubo, Tadatami; Imamura, Yoshiki

PATENT ASSIGNEE(S): Japan Oil Seal Industry Co., Ltd.

SOURCE: Jpn. Tokkyo Koho, 2 pp.

CODEN: JAXXAD

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

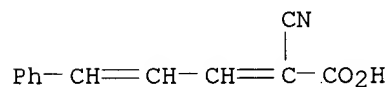
PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	JP 47036270	B4	19720912	JP 1969-93745	19691122
AB	Poly(vinyl alc.) (3 g, d.p. 2000, sapon. degree 80%) was swollen in 3 g pyridine and treated 5 hr at 60.deg. with 15 g .alpha.-cyanocinnamic acid chloride to form a mixt., which was blended with 200 ml acetone and heated				
	2 hr at 50.deg. to yield 9.6 g poly(vinyl .alpha.-cyanocinnamate) [37685-33-9]. The (.alpha.-cyanocinnamylidene)acetate polymer could be similarly prepd.				
IT	<b>39283-32-4P</b>				
	RL: PREP (Preparation)				
	(manuf. of photosensitive)				
RN	39283-32-4 CAPLUS				
CN	Ethenol, homopolymer, 2-cyano-5-phenyl-2,4-pentadienoate (9CI) (CA INDEX NAME)				

CM 1

CRN 24139-57-9

CMF C12 H9 N O2



CM 2

CRN 9002-89-5

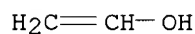
CMF (C2 H4 O) x

CCI PMS

CM 3

CRN 557-75-5

CMF C2 H4 O



L4 ANSWER 64 OF 70 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1973:58922 CAPLUS

DOCUMENT NUMBER: 78:58922

TITLE: Photosensitivity of poly(vinyl esters) of substituted cinnamylideneacetic acids

AUTHOR(S): Tanaka, Hideaki; Sato, Yoshimi

CORPORATE SOURCE: Natl. Chem. Lab. Ind., Hiratsuka, Japan

SOURCE: J. Polym. Sci., Part A-1 (1972), 10(11), 3279-87

CODEN: JPLCAT

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Of the photosensitive polymers  $[-\text{CH}_2\text{C}(\text{O}_2\text{CCR}_2:\text{CHCR}_1:\text{CHPh})\text{H}-]_n$  (I,  $\text{R}_1 = \text{H}$ ,  $\text{R}_2 = \text{H}$ , Me, Ph, OPh, CN;  $\text{R}_1 = \text{R}_2 = \text{Me}$ ), studied, the polyesters of planar acids reacted photochem. effectively, and were spectrally sensitized by the usual triplet sensitizers, while those of twisted acids had poor photosensitivity. Poly(vinyl .alpha.-cyanocinnamylideneacetate) [38414-31-2] had both good photosensitivity and storage stability.

IT **39283-32-4**

RL: USES (Uses)  
(photosensitivity of)

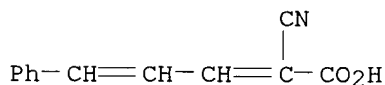
RN 39283-32-4 CAPLUS

CN Ethenol, homopolymer, 2-cyano-5-phenyl-2,4-pentadienoate (9CI) (CA INDEX NAME)

CM 1

CRN 24139-57-9

CMF C12 H9 N O2



CM 2

CRN 9002-89-5

CMF (C2 H4 O)x

CCI PMS

CM 3

CRN 557-75-5  
CMF C2 H4 O

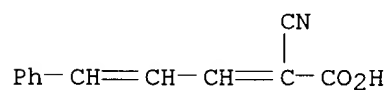


IT **24139-57-9P**

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)

RN 24139-57-9 CAPLUS

CN 2,4-Pentadienoic acid, 2-cyano-5-phenyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



L4 ANSWER 65 OF 70 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1971:509544 CAPLUS

DOCUMENT NUMBER: 75:109544

TITLE: Comparative study of intramolecular  
O-phosphorylations

during the condensation of aldehydes with phosphonate  
carbanions having several nucleophilic sites

AUTHOR(S): Danion, Daniel; Carrie, Robert

CORPORATE SOURCE: U. E. R. Struct. Prop. Matiere, Univ. Rennes, Rennes,  
Fr.

SOURCE: Tetrahedron Lett. (1971), (34), 3219-22  
CODEN: TELEAY

DOCUMENT TYPE: Journal

LANGUAGE: French

AB The oxyanion intermediate,  $\text{PhCH}(\text{O}^-)\text{C}(\text{CN})\text{PhCH}(\text{CN})\text{P}(\text{O})(\text{OEt})_2$  (I), is stabilized by the CN vicinal to the P; I is formed by an attack at the .beta.-position of  $\text{PhCH}(\text{CN})\text{CH}(\text{CN})\text{P}(\text{O})(\text{OEt})_2$  (II). Cyclopropane intermediates are not obtained, but an O-benzyl-O, O-diethyl phosphate is isolated. II is treated with BzH to give  $\text{PhCH}[\text{OP}(\text{O})(\text{OEt})_2]\text{C}(\text{CN})\text{PhCH}_2\text{CN}$  (III). III is treated with NaH in  $\text{P}(\text{O})(\text{NMe}_2)_3$  to give  $\text{PhCH}:\text{C}(\text{CN})\text{CH}(\text{CN})\text{Ph}$  (IV). NMR spectral data are given for III and IV.

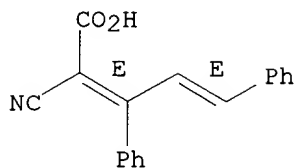
IT **33735-81-8P**

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)

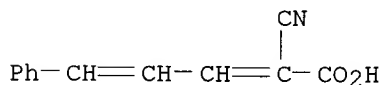
RN 33735-81-8 CAPLUS

CN 2,4-Pentadienoic acid, 2-cyano-3,5-diphenyl-, (E,E)- (8CI) (CA INDEX NAME)

Double bond geometry as shown.



L4 ANSWER 66 OF 70 CAPLUS COPYRIGHT 2002 ACS  
 ACCESSION NUMBER: 1969:523865 CAPLUS  
 DOCUMENT NUMBER: 71:123865  
 TITLE: Conjugated imines; addition of active methylene compounds  
 AUTHOR(S): Singh, Nazar; Sandhu, J. S.  
 CORPORATE SOURCE: Punjabi Univ., Patiala, India  
 SOURCE: J. Indian Chem. Soc. (1969), 46(8), 751-3  
 CODEN: JICSAH  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB Di-Et malonate reacted with N-cinnamylideneaniline (I) to give  $\text{PhCH:CHCH(NHPh)CH(CO}_2\text{Et)}_2$ . Similarly, I reacted with cyanoacetamide, Et cyanoacetate, cyanoacetic acid, malonic acid, and acetylacetone to yield  $\text{PhCH:CHCH:-CRR}_1$  ( $\text{R} = \text{CN}$ ,  $\text{R}_1 = \text{CONH}_2$ ;  $\text{R} = \text{CN}$ ,  $\text{R}_1 = \text{CO}_2\text{Et}$ ;  $\text{R} = \text{CN}$ ,  $\text{R}_1 = \text{CO}_2\text{H}$ ;  $\text{R} = \text{R}_1 = \text{CO}_2\text{H}$ ;  $\text{R} = \text{R}_1 = \text{Ac}$ ), resp. Malononitrile gave  $\text{PhCH[CH(CN)}_2\text{]CH:CHCH(CN)}_2$  with I. Ir data are given.  
 IT **24139-57-9P**  
 RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. of)  
 RN 24139-57-9 CAPLUS  
 CN 2,4-Pentadienoic acid, 2-cyano-5-phenyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



L4 ANSWER 67 OF 70 CAPLUS COPYRIGHT 2002 ACS  
 ACCESSION NUMBER: 1967:443606 CAPLUS  
 DOCUMENT NUMBER: 67:43606  
 TITLE: Condensation of 5,5-dimethyl-2,4-diphenyl-2-hydroxy-2,5-dihydrofuran with acetic, nitroacetic, and cyanoacetic acid esters  
 AUTHOR(S): Orlova, A. N.; Lineva, V. S.  
 CORPORATE SOURCE: A. I. Gertsen Leningr. Gos. Ped. Inst., Leningrad, USSR  
 SOURCE: Zh. Org. Khim. (1967), 3(4), 748-50  
 CODEN: ZORKAE  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian  
 AB The title reactions gave Et 2-(5,5-dimethyl-2,4-diphenyl-2,5-dihydro-2-furyl)-2-nitroacetate (I) and Et 2-(5,5-dimethyl-2,4-diphenyl-2,5-dihydro-

2-furyl)-2-cyanoacetate (II), but no product could be isolated by treating 5,5-dimethyl-2,4-diphenyl-2-hydroxy-2,5-dihydrofuran (III) with AcCH<sub>2</sub>CO<sub>2</sub>Et. A mixt. of 3 g. III, 1.6 ml. CH<sub>2</sub>(NO<sub>2</sub>)CO<sub>2</sub>Et, and 3 drops pyridine was heated 2 hrs. at 130-5.degree., cooled, and dild. with Et<sub>2</sub>O to give 2.7 g. I, m. 68-9.degree. (ligroine-Et<sub>2</sub>O). Similarly, II, m. 118-9.degree. (ligroine-Et<sub>2</sub>O), was prepd. in 65% yield. Hydrolysis of I by boiling in MeOH-HCl or EtOH-NaOH gave 69 and 74% III resp. Similarly, acid or alk. hydrolysis of II under severe conditions gave 70 and 80% I, resp., but mild alk. hydrolysis (4 hrs. at 45-50.degree. of 1.55 g. II in 25 ml. EtOH with 0.55 NaOH in 12 ml. water) gave 78% Me<sub>2</sub>C(OH)CPh:CHCPh:C(CN)CO<sub>2</sub>H, m. 50-55.degree. (decarboxylation at 83.degree.), identified by ir and chem. behavior.

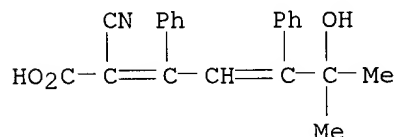
IT **15206-91-4P**

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)

RN 15206-91-4 CAPLUS

CN 2,4-Heptadienoic acid, 2-cyano-6-hydroxy-6-methyl-3,5-diphenyl- (8CI)  
(CA

INDEX NAME)



L4 ANSWER 68 OF 70 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1966:27520 CAPLUS

DOCUMENT NUMBER: 64:27520

ORIGINAL REFERENCE NO.: 64:5078g-h,5079a-h

TITLE: New synthesis of aryl-substituted 3-azapyrylium salts and their reaction with CH-acidic compounds

AUTHOR(S): Schmidt, Richard

CORPORATE SOURCE: Tech. Hochsch., Stuttgart, Germany

SOURCE: Chem. Ber. (1965), 98(12), 3892-901

DOCUMENT TYPE: Journal

LANGUAGE: German

GI For diagram(s), see printed CA Issue.

AB The reaction of the I, obtained from [Ph<sub>3</sub>C]ClO<sub>4</sub> and 4H-1,3-oxazines, (II) with CH-acidic compds. yielded the corresponding (cis,trans)-butadiene derivs. which were very readily cyclized thermally or in some cases by Et<sub>3</sub>N to pyridine derivs. The reaction of 4-methylthio-2-aryl-5,6-tetramethylene-3-azapyrylium iodides (III) with CH<sub>2</sub>(CN)<sub>2</sub> (IV) yielded the analogously substituted isoquinoline derivs. The substituted 4H-1,3-oxazinium salts (V) were prepd. by the standard methods and converted with 1:1 NH<sub>4</sub>OH-H<sub>2</sub>O to the corresponding VI. VI (R = R<sub>1</sub> = R<sub>3</sub> = Ph, R<sub>2</sub> = H) (VII) (3.11 g.) in 40 cc. dry MeCN treated with stirring at room temp. with 3.42 g. II and cooled after 0.5 hr. to 0.degree. yielded 3.5 g. I (R = R<sub>1</sub> = R<sub>3</sub> = Ph, R<sub>2</sub> = H) (VIII), m. 295-300.degree. (decompn.).

By these methods were prepd. the V, VII, and I listed in the 1st table. VIII (2.05 g.), 0.41 g. IV, and 25 cc. dry MeCN treated dropwise with

0.75

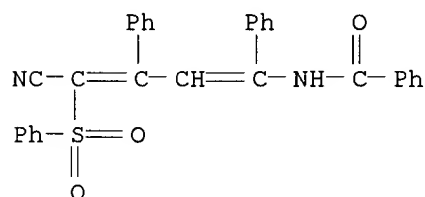


cc. Et<sub>3</sub>N and kept 20 min. gave 1.12 g. IX (R = R<sub>1</sub> = R<sub>3</sub> = Ph) (X), m. 242.degree.; the mother liquor yielded 0.62 g.

cis-(NC)2C:CR<sub>3</sub>CH:CR<sub>1</sub>NH-COR  
(XI) (R = R<sub>1</sub> = R<sub>3</sub> = Ph) (XII), m. 176.degree. (EtOH). R, R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, M.p. and % yield of V, M.p. and % yield of VII, M.p. and % yield of I; Ph, PH, H, Ph, 204.degree. (decompn.), 64, 106.degree., 82, --, --; p-ClC<sub>6</sub>H<sub>4</sub>, Ph, H, Ph, 190.degree. (decompn.), 52, 126.degree., 85, 249-52.degree. (decompn.), 94; Ph, p-ClC<sub>6</sub>H<sub>4</sub>, H, Ph, 191-2.degree., 64, 132.degree., 80, 247.degree. (decompn.), 88; Ph, Ph, H, p-ClC<sub>6</sub>H<sub>4</sub>, 206.degree., 59, 131.degree., 81, 244.degree., 93; p-MeC<sub>6</sub>H<sub>4</sub>, Ph, H, Ph, 185-7.degree., 61, 124-6.degree., 97, 212.degree., 85; Ph, Ph, H, p-MeC<sub>6</sub>H<sub>4</sub>, 174-6.degree. (decompn.), 84, 100.degree., 86, 250-5.degree. (decompn.), 92; Ph, H, H, Ph 230-2.degree., 99, 79-81.degree., 49, --, 94; Ph, H, Ph, Ph, 210-20.degree. (decompn.), 65, 95-6.degree., 62, --, --; Ph, H, H, Bu, 194-7.degree., 20, --, --, --, --; Similarly were prepd. the IX and XI listed in the 2nd table. A similar run with 0.65 cc. Et<sub>3</sub>N gave no X but only 1.48 g. mixed XII and the trans-isomer, m. 160-5.degree.. Mp. and %, M.p. and %; R, R<sub>1</sub>, R<sub>3</sub>, yield of IX, yield of XI; p-ClC<sub>6</sub>H<sub>4</sub>, Ph, Ph, 231.degree., 65, 161.degree., 22; Ph, p-ClC<sub>6</sub>H<sub>4</sub>, Ph, 184.degree., 64, 154.degree., 20; Ph, Ph, p-ClC<sub>6</sub>H<sub>4</sub>, 210.degree., 37, 183.degree., 48; p-MeC<sub>6</sub>H<sub>4</sub>, Ph, Ph, 211-13.degree., 56, 142-4.degree., 26; Ph, Ph, p-MeC<sub>6</sub>H<sub>4</sub>, 254-5.degree., 56, 168.degree., 25; NCCH<sub>2</sub>CO<sub>2</sub>Me and VIII gave similarly 86% MeO<sub>2</sub>C(NC)C:CPhCH:CPhNHBz, m. 140-1.degree. (MeOH). BzCH<sub>2</sub>CN and VIII yielded 85% Bz(NC)C:CPhCH:CPhNHBz, m. 161.degree. (EtOH). PhSO<sub>2</sub>CH<sub>2</sub>CN and VIII gave similarly 96% PhSO<sub>2</sub>(NC)C:CPhCH:CPhNHBz, m. 174.degree. (EtOH). (cis + trans)-XII (1.2 g.) in 25 cc. MeCN with 0.2 cc. Et<sub>3</sub>N gave X and cis-XII. (cis + trans)-XII (3.2 millimoles) treated under various conditions with Et<sub>3</sub>N gave X and cis-XII (millimoles Et<sub>3</sub>N, reaction time in min., and % yield of X and cis-XII given): 1,4, 20, 42, 51; 1.4, 720, 35, 55; -- (2 drops), 20, 37, 51; 1.4 (cis-XII used), 1440, --, 95. NCCH<sub>2</sub>CONH<sub>2</sub> (18.5 g.) and 3 g. piperidine in 150 cc. 96% EtOH treated at 70.degree. with 44.8 g Bz<sub>2</sub>CH<sub>2</sub> and refluxed 20 hrs. yielded 34 g. 2-hydroxy-4,6-diphenyl-3-cyanopyridine (XIII), m. 324.degree.. XIII (5.44 g.) and 3.2 g. Et<sub>2</sub>NPh in 25 cc. POCl<sub>3</sub> heated 2 hrs. at 105.degree. gave 3.5 g. 2-Cl analog (XIV) of XIII, m. 147-8.degree.. XIV (5.42 g.) in 60 cc. concd. NH<sub>4</sub>OH and 30 cc. EtOH heated 48 hrs. in an autoclave at 100.degree. yielded 3.7 g. 2-NH<sub>2</sub> analog (XV) of XIII, m. 184.degree. (EtOH). XV (0.9 g.) in 6 cc. C<sub>5</sub>H<sub>5</sub>N heated 2.5 hrs. at 100.degree. with 0.5 BzCl yielded 1.2 g. 2-BzNH analog of XIII, m. 241.degree.. VIII (2.05 g.) in 25 cc. dry MeCN treated 20 min. with 0.9 g. red 1,3,3-trimethyl-2-(4-benzoylamino-2,4-diphenyl-1,3-butadienyl)indolium perchlorate, m. 180-2.degree. (EtOH). By the method of Huenig and Huebner (CA 57, 4654h) were prepd. the following XVI (R, color, m.p., and % yield given): p-ClC<sub>6</sub>H<sub>4</sub>, brown, 162-3.degree., 51; p-MeC<sub>6</sub>H<sub>4</sub>, red-brown, 166-7.degree., 59; and the following XVII (R, m.p., and % yield given): p-ClC<sub>6</sub>H<sub>4</sub>, 171.degree., 75; p-MeC<sub>6</sub>H<sub>4</sub>, 160-4.degree., 78. XVII (R = Ph) (XVIII) (1.92 g.) and 0.35 g. IV treated 35 min. with 0.75 cc. Et<sub>3</sub>N gave

0.8 g. XIX (R = Ph), m. 226-7.degree. (MeCN). Similarly were prepd. from the appropriate III the following XIX (R, m.p., and % yield given):  
 p-ClC<sub>6</sub>H<sub>4</sub>, 220.degree., 57; p-MeC<sub>6</sub>H<sub>4</sub>, 243.degree., 63.

IT **4604-03-9**, Benzamide, N-[4-cyano-1,3-diphenyl-4-(phenylsulfonyl)-1,3-butadienyl]-  
 (prepn. of)  
 RN 4604-03-9 CAPLUS  
 CN Benzamide, N-[4-cyano-1,3-diphenyl-4-(phenylsulfonyl)-1,3-butadienyl]-  
 (7CI, 8CI) (CA INDEX NAME)



L4 ANSWER 69 OF 70 CAPLUS COPYRIGHT 2002 ACS  
 ACCESSION NUMBER: 1962:456063 CAPLUS  
 DOCUMENT NUMBER: 57:56063  
 ORIGINAL REFERENCE NO.: 57:11116f-i,11117a  
 TITLE: Ultraviolet filters  
 INVENTOR(S): Wahl, Ottmar; Goetze, Johannes  
 SOURCE: 6 pp.  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Unavailable  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 1128603		19620420	DE	19590312
GB 948627			GB	
US 3125597		1964	US	

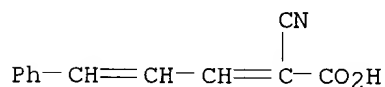
AB The following derivs. of 1-phenyl,3-butadiene were good absorbers for ultraviolet light: PhCH:CHCH:C(CN)CO<sub>2</sub>H, yellow, m. 210.degree.; Na salt and Et ester, yellow, m. 115.degree.. PhCH:CHCH:C(CO<sub>2</sub> H)<sub>2</sub>, yellow, m. 207.degree.; di-Na salt, white, m. above 360.degree.; di-Me ester, m. 62.degree.; dicyclohexylamine salt; di-BuNH<sub>2</sub> salt, m. 128.degree.; distearylamine salt, m. 121.degree. (AcOEt). PhCH:CHCH: CPhCO<sub>2</sub>R (I) (R and properties): H, m. 188.degree.; Na, white leaflets; Me, m. 82.degree.; Et, m. 52.degree.; iso-Pr, yellow oil, b0.4 198.degree.; iso-Bu, very viscous oil, b0.2-0.3 199-202.degree.; iso-Am, very viscous oil, b0.2 198.degree.; CH<sub>2</sub>CH(OH)Me [from I (R = H) and 1,2-propylene glycol], very viscous oil, b0.4 225-35.degree. and CH<sub>2</sub>CH(OH)CH<sub>2</sub>CH<sub>2</sub>OH [from I (R = H) and 1,2,4-butanetriol] highly viscous oil. I (R = H) (50 g.), 50 ml. SOCl<sub>2</sub>, and 50 ml. C<sub>6</sub>H<sub>6</sub> were refluxed 5 hrs. to yield the acid chloride of I, m. 93.degree. (CS<sub>2</sub> and petr. ether); this chloride, reacted with HOCH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub> gave the ethanalamide of I, m. 152.degree. (MeOH, and with cyclohexylamine, the cyclohexylamide, m. 177.degree. (C<sub>6</sub>H<sub>6</sub>). An ice-cooled mixt. of 25 g. phenylacetone and 25 g. cinnamaldehyde was satd.

with HCl-gas; after standing for 24 hrs., the viscous mass was dissolved in EtOH, the soln. cooled in CO<sub>2</sub>/acetone, the EtOH decanted and the solid residue distd. to yield PhCH:CHCH:CPhCOMe, yellow, b0.3 185-9.degree., m. 78.degree. (iso-PrOH). o-Chlorocinnamaldehyde (20 g.), 20 g. malonic acid, and 20 g. AcOH heated 5 hrs. on steam bath yielded 2-ClC<sub>6</sub>H<sub>4</sub>CH:CHCH:C(CO<sub>2</sub>H)<sub>2</sub>, light yellow, m. 219.degree. (EtOH); di-Na salt, m. above 360.degree.. Absorption spectra are given.

IT **24139-57-9**, 2,4-Pentadienoic acid, 2-cyano-5-phenyl-  
**93506-68-4**, 2,4-Pentadienoic acid, 2-cyano-5-phenyl-, sodium salt (prepn. of)

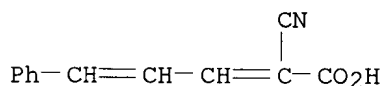
RN 24139-57-9 CAPLUS

CN 2,4-Pentadienoic acid, 2-cyano-5-phenyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



RN 93506-68-4 CAPLUS

CN 2,4-Pentadienoic acid, 2-cyano-5-phenyl-, sodium salt (7CI) (CA INDEX NAME)



● Na

L4 ANSWER 70 OF 70 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1962:24786 CAPLUS

DOCUMENT NUMBER: 56:24786

ORIGINAL REFERENCE NO.: 56:4633b-i,4634a-c

TITLE: Investigations in the vitamin A series. IV. Some cases

of abnormal decarboxylation

AUTHOR(S): Smit, A.

CORPORATE SOURCE: N. V. Philips-Duphar, Weesp, Neth.

SOURCE: Rec. Tray. Chim. (1961), 80, 891-904

DOCUMENT TYPE: Journal

LANGUAGE: English

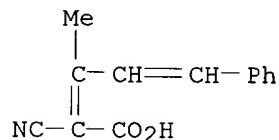
GI For diagram(s), see printed CA Issue.

AB cf. CA 51, 298c.-The decarboxylation of cyanoionylideneacetic acid and other cyanocarboxylic acids was studied. .beta.-Ionone (48 g.), 30 g. cyanoacetic acid, and 5 g. NH<sub>4</sub>OAc was refluxed in 300 ml. C<sub>6</sub>H<sub>6</sub> and 200 ml. HOAc 4 hrs. with removal of H<sub>2</sub>O, the mixt. cooled dild. with Et<sub>2</sub>O, the acids extd. with 500 ml. N NaOH, the alk. ext. washed, acidified, and the aq. soln. extd. with Et<sub>2</sub>O to give after crystn. from C<sub>6</sub>H<sub>6</sub> 18 g. trans-cyano-.beta.-ionylideneacetic acid (I), m. 172-4, .lambda. 272,346

m.mu. (.epsilon. 8400, 17,000); NH<sub>4</sub> salt m. 145-8.degree.. The C<sub>6</sub>H<sub>6</sub> mother liquors were dild. with 200 ml. petr. ether and treated with NH<sub>3</sub> to give NH<sub>4</sub> salt of the cis acid (II), m. 158-60.degree.. II was treated with 2N H<sub>2</sub>SO<sub>4</sub> to give cis-cyano-.beta.-ionylideneacetaldehyde acid (III), m. 122-4.degree., .lambda. 274, 351 m.mu. (.epsilon. 7800, 18,700). Similarly prepd. were (starting material, product, m.p., .lambda., .epsilon. given): .alpha.-ionone, cyano-.alpha.-ionylideneacetic acid (IV) (one isomer only), 125-7.degree., 282 m.mu., 23,700; vitamin A (mixt. of trans and cis C<sub>18</sub> ketone), 2-cyano-vitamin A acid (V), 188-93.degree., 399 m.mu., 40,600; benzalacetone, 2-carboxy-3-methyl-5-phenylpenta-2,4-dienonitrile (VI), 206-7.degree. (decompn.), 238 and 337 m.mu., 10,200 and 33,300. Also prepd. was citrylidenecyanoacetic acid (VII), m. 118-20.degree., .lambda. 302 m.mu. (.epsilon. 26,000). trans-.beta.-ionylideneacetaldehyde was condensed with cyanoacetic acid in EtOH and aq. NaOH to give cyano(.beta.-ionylideneethylidene)acetic acid (VIII), m. 220-1.degree., .lambda. 378 m.mu., (.epsilon. 29,500). Ionolacetic acid (36 g.) was treated with 36 ml. Ac<sub>2</sub>O to give .beta.-ionylidenemethane, b0.03 60-5.degree., .lambda. 227, 264 m.mu., (.epsilon. 12,300, 11,300). MeMgI was added to benzalacetone and the product dehydrated with p-toluenesulfonic acid in boiling C<sub>6</sub>H<sub>6</sub> to give 2-methyl-4-phenyl-1,3-butadiene, m. 37.degree., .lambda. 280 m.mu. (.epsilon. 28,200). The .alpha.-carboxy nitriles were refluxed in C<sub>5</sub>H<sub>5</sub>N 5 parts under N, the mixt. cooled, 2N H<sub>2</sub>SO<sub>4</sub> added, the product extd. with Et<sub>2</sub>O, and purified by filtration through silica gel (not on Al<sub>2</sub>O<sub>3</sub>) or by distn. in vacuo to give a .beta., .lambda. unsatd. isomer of the normal .alpha., .beta.-unsatd. nitrile (starting material, product, b.p., % yield, .lambda., E<sub>11</sub> given): I, C<sub>15</sub>H<sub>21</sub>N (IX), b0.05 92-5.degree., 85, 226 and 263 m.mu., 518 and 475; III, IX, b0.04 87-91.degree., 92, 226 and 262 m.mu., 564 and 494; IV, IX, -, 54, 234 m.mu., 951; V, C<sub>20</sub>H<sub>27</sub>N, -, -(unstable), 319 m.mu., 720; VI, C<sub>12</sub>H<sub>11</sub>N, -, 86,282 m.mu., 1110; VII, C<sub>12</sub>H<sub>17</sub>N, -, 89, 235 m.mu., 876; VIII, C<sub>17</sub>H<sub>23</sub>N, -, 32, 220-3.50 m.mu., 300. The nitriles obtained by decarboxylation were isomerized to the .alpha., .beta.-unsatd. compds. by treating 1 g. nitrile with 20 ml. 2N methanolic KOH overnight at room temp. then partial purification (product, % yield, .lambda., E<sub>11</sub> given): .beta.-ionylideneacetonitrile (X), 90, 253 and 305 m.mu., 495 and 515; .alpha.-ionylideneacetonitrile, 95, 262 m.mu., 870 [after purification m. 74-5.degree., .lambda. 262 m.mu. (.epsilon. 26,000)]; citrylidenecetonitrile, 87, 273 m.mu., 825; (.beta.-ionylideneethylidene)acetonitrile, 65, 325 m.mu., 752; vitamin A acid nitrile, 78, 351 m.mu., 1380; 3-methyl-5-phenyl-2,4-pentadienonitrile, 85, 230 and 304 m.mu., 592 and 1440. Crude IX chromatographed on Al<sub>2</sub>O<sub>3</sub> gave X. Crude X (115 g.) was distd. in vacuo then crystd. from petr. ether to give trans-.beta.-ionylideneacetonitrile (XI), m. 34.2-6.degree., .lambda. 253, 305 m.mu. (.epsilon. 13,900, 16,600). The cis isomer could not be crystd. from X, so it was prepd. from cis-.beta.-ionylideneacetic (XII). Treatment of XII with PCl<sub>3</sub> followed by NH<sub>3</sub> gave 38% cis-.beta.-ionylideneacetamide (XIII), m.

132-4.degree., .lambda. 250, 299 m.mu., (.epsilon. 11,000, 13,200). The trans amide was prepd. similarly (48% yield), m. 121-2.degree., .lambda. 254, 299 m.mu. (.epsilon. 13,800, 15,600). XIII (10 g.) in 30 ml. C6H6 and 8.7 g. Et3N was treated with 8.1 g. P2O5 at 0.degree. then heated 1 hr. at 80.degree. to give 6.1 g. XIII and 1.1 g. cis-.beta.-ionylideneacetonitrile, m. 35.8-6.0.degree., mixed m.p. with XI below 18.degree., .lambda. 250, 305 m.mu. (.epsilon. 10,500, 13,200). Degradation of IX by ozonolysis gave 30.2-32.8% geronic acid semicarbazone, compared with 25.8-30.8% on ozonolysis of XI and 28.6%-30.9% on ozonolysis of .beta.-ionone. Several possibilities for the structure of IX were eliminated on the basis of the ozonolysis and spectral data, leaving the .beta.-methylene structure. In the case of the decarboxylation of VII and VIII, the structure of the new product was considered to be that with a .beta., .gamma.-double bond conjugated with a .delta.-methylene group, on the basis of comparison of the spectra with those of known compounds of analogous structure. On KOH treatment, the double bonds rearranged to the expected .alpha..beta.:.gamma.,.delta.-conjugated compd. The authors concluded that the isomerization took place after the decarboxylation, rather than before, as was the case in other decarboxylation reactions.

IT 54681-21-9, 2,4-Pentadienoic acid, 2-cyano-3-methyl-5-phenyl-  
(prepn. of)  
RN 54681-21-9 CAPLUS  
CN 2,4-Pentadienoic acid, 2-cyano-3-methyl-5-phenyl- (7CI, 9CI) (CA INDEX NAME)



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(FILE 'HOME' ENTERED AT 08:21:39 ON 09 DEC 2002)

FILE 'REGISTRY' ENTERED AT 08:21:50 ON 09 DEC 2002

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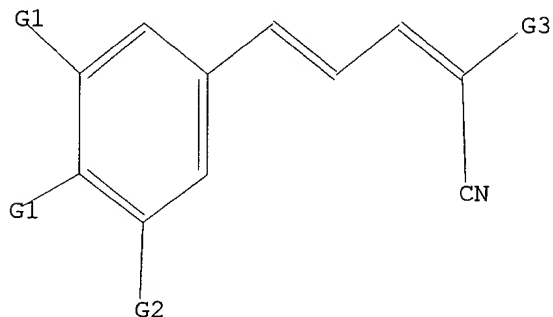
L4 70 S L3  
L5 174654 S L4 AND INHIBITING CELL PROLIFERATION OR CANCER  
L6 33 S HEMATOPOIETIC CANCER  
L7 0 S L4 AND L6  
L8 33 S L6 AND L5  
L9 73957 S LEUKEMIA

L10 0 S L4 AND L9  
 L11 6868 S L9 AND L5  
 L12 5105 S LYMPHOBLASTIC LEUKEMIA OR MYELOMONOCYTE LEUKEMIA OR CHRONIC  
 M  
 L13 0 S L4 AND L12

=> d 11

L1 HAS NO ANSWERS

L1 STR



G1 H, CF3, OH, SH, CS2H, NH2, NO2, O, X, MeO

G2 H, S, OH, SH, NO2, Cb

G3 COOH, PO3H2, SO2, NH2

Structure attributes must be viewed using STN Express query preparation.

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---Logging off of STN---

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Executing the logoff script...

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